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ABSTRACT

This study obtained data to compare the progress of low income Follow Through pupils with full-year Head Start pupils attending regular kindergarten classes. Five groups of children were compared according to class characteristics, parent participation, teacher interviews, and parent interviews. All groups were administered the Metropolitan Readiness Test and the Wichita Guidance Center Kindergarten Check List. ITPA was given as a pre- and posttest. The home conditions of the two groups of pupils who had full-year Head Start were found to be comparable. A high level of parent involvement in school and school-related activities was indicated. Interview data showed that teachers were enthusiastic about having teacher aides and noted improvement in pupils in the areas of awareness and self-acceptance, development of interest levels and curiosity, and readiness for more formal instruction. Of the five groups, Follow Through pupils showed the greatest gains in adjustment to school. On a test of readiness, full-year Head Start pupils not in Follow Through were comparable to full-year Head Start pupils in Follow Through. In language development, greater mean gains were made by Follow Through pupils on six out of nine subtests and on the total score. The growth of Follow Through pupils will be studied as they progress through the various grade levels. (DR)

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EVALUATION REPORT

SEPTEMBER 1968 - MAY 1969

FOLLOW THROUGH PROJECT

INITIAL YEAR

Project No. OEG-0-8-522451-4526(100)

Submitted to

United States Office of Education

By
Board of Education, Unified School District 259
428 South Broadway, Wichita, Kansas 67202

October 1969

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WICHITA, KANSAS

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Dr. Ralph E. Walker	Director, Research and Information Services Division
Mrs. Jo Miller Barr	Research Assistant

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INTRODUCTION

Education has long been valued as the major vehicle for delivering the youth of our nation into the mainstream of American life. It is the means by which children can realize their potential to participate in society to their fullest and to the degree that their abilities and desires allow them. It has been the hope of public education to assure equal opportunity by providing certain skills to young people which, in effect, are the working papers to upward social and economic mobility.

Horace Mann (Commager, 1958) referred to education as

> . . . the great equalizer of the conditions of men . . . the balance wheel of the social machinery. . . . It gives each man the independence and the means by which he can resist the selfishness of other men.

It has been only in the past two decades that there has been general consensus that to limit educational opportunities really means to limit a person's freedom. The U.S. Supreme Court, in the 1954 decision on school desegregation, said of education:

> Today it is a principal instrument in awakening the child to cultural values, in preparing him for later professional training, and in helping him to adjust normally to his environment. In these days, it is doubtful that any child may reasonably be expected to succeed in life if he is denied the opportunity of an education.

Public school education has tended to serve a majority of youth in such a way that they have achieved skills and attitudes which have provided them the means of upward social and economic mobility. However, one group, the culturally disadvantaged, low-income segment of our society, has been unable to make good use of the standard programs and curricula of public schools in a way that the middle class population has historically been able to do. Data show that hundreds of thousands of low-income children across the country are moved on from the sixth grade with reading and math skills two to three grades below level. The problem of not learning these basic skills in elementary school forecasts severe difficulties in school work in later grades, when the ability to read and comprehend is requisite for successful academic achievement in all other studies. Some educators argue, and there is ample evidence to support their position, that it is possible to predict with a high degree of accuracy the success or failure of an individual, in terms of the ability to earn a livelihood that will make him a productive, participating citizen, by the time he is eight or nine years old.

The question arises, then, who are the poor disadvantaged who fail to share in the fruits of this affluent society because they have not been able to be served adequately by standard public education techniques? What are the life styles and cultural characteristics that mitigate successful participation in the public school system?

There is general consensus among educators that the greatest correlate of low school achievement is socioeconomic background of the pupil, not ethnic background (Equality of Educational Opportunity, 1966). That is to say, the problem of educating is the problem of poverty, not race. Most low-income families in the United States are white, though a much higher percentage of Negroes are low-income. It is also a fact that in 1960, the percentage of Negroes who completed high school was half that of whites; the percentage of Negroes who had completed college was considerably less than half that of whites (Pettigrew, 1965).

Low academic achievement is the cause of great concern, for automation and its attendant effects are eliminating unskilled and semiskilled jobs, whereas professional and technical jobs are rapidly expanding. Heretofore, children with less scholastic ability were able to drop out of school and academic life and still provide a living for themselves, and later for their families. However, with cybernetics, the social system is undergoing deep and significant changes. It therefore is incumbent upon those concerned with education to actively seek out ways to prepare children of low-income as well as non low-income families to participate in this increasingly complex society.

In our society, a continuously low income is directly associated with certain life conditions. Family disorganization and adults with little or no formal education characterize low-income families. Crowding is a major feature of an urban depressed area and marginal groups, more often than not, live in quarters that are inadequate in terms of person-room ratios. Limited success in formal education and occupations restricted to manual types of work lead to comparative simplification of the experience world, powerlessness, deprivation, and insecurity. Because of poverty, there may be fewer "things" that are available, and therefore fewer things to label; what is not seen is not named, nor is its function identified or understood. Lower class families tend to use informal language to convey concrete needs. Gestures help the child follow directions, but in the process an object has not been given its proper name. It is obvious that if a child receives inadequate verbal stimulation, he may not only be deficient in language skill, but indeed will have difficulty organizing his perceptual skills. This is to say there is a definite relationship between communication and cognition. As symbols and words have little or no meaning, the greater the difficulty of understanding and, therefore, doing.

Noise levels, due to overcrowding, may be very high in low-income homes, and parents tired and ill-tempered from long hours of hard work away from home. They may have to face home responsibilities coupled with problems which stem from poverty and, because of a lack of psychic as well as physical energy, may spend little time with their children. Communication tends to be brief, to the point, and mostly concerns correction or punishment.

Hunt (in Passow, Goldberg, & Tannenbaum, 1967) indicates that for the first year of a child's life the superstimulation brought about by the crowded conditions of poor families may actually be helpful in terms of visual and auditory inputs that will aid in the development of the child. However, by the second and third year, crowding and other effects of poverty may serve as a constraint in developing auditory and visual discrimination. Noise may create situations which cause a child to "tune out," thereby contributing to a learned inattention; and, because adults are not readily available for conversation, the ability to communicate often becomes retarded.

For this reason, many culturally deprived children come to the school inadequately prepared to meet the middle class standards of performance and expectation. In addition, the culture of poverty often generates a devaluation of self, especially for those who are Negro. Studies showing a Negro child's preference for white dolls is an indication of a lack of self-esteem. Negro children often do not know their birthdates, nor does the family take note of a child's special day by celebrating with the usual middle class gifts and birthday cake---one more concern in an overburdened life.

It is important to point out that children of poverty develop positive traits in spite of the deprivations they suffer. The overcrowding of the home and the multiple problems often develop a great sense of loyalty to the family, and an ability to share and cooperate. Physical strength is valued; to defend one's self or to gain one's point through aggressive action is considered acceptable behavior in the mores of lower class poor.

Low verbal ability, learned habits of inattention associated with "tuning out," the learned need to take immediate physical action to make a point---conditions of learning---contribute to the lower scores on standardized achievement tests that are associated with children of low-income families. Further, as poor children grow older, their performance level frequently decreases. Deutsch (1967) speaks of this as the cumulative deficit phenomenon: as the low-income child moves from grade to grade, standard school measures of mental ability yield

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lower scores.

Most present day educators and social scientists reject the proposition that "innate" ability is related to race or social class of individual children.* The fixed intelligence concept assumes that constancy of an individual's I.Q. is a valid expectation. This concept has its roots in Darwinism and was supported through the works of early psychologists.

However, research done on twins during the 1940's began to show that differences could be due to environment (Woodworth, 1941). Hunt (Passow, et.al., 1967) believes that a lack of constancy in the I.Q.'s of preschool children is to be expected, and that the I.Q. will only remain fixed if there is no variation in the environmental encounters. Statements about the rate of intellectual growth, in Hunt's view, must take into consideration the series of environmental encounters:

> Cultural deprivation can be seen as a failure to provide experience for infants and young children that will stimulate and develop brain processes that can be translated into education learning.

The question remains, how can children who have been disadvantaged by their environment---family disorganization, poverty, large families, lack of motivation for learning, and often times a deep hostility toward institutions and people---those children most in need of special learning experiences, best be helped to get a better start in life? Some educators and behavioral scientists believe that certain characteristics, such as general intelligence and general school achievement, have a negatively accelerated curve of development which reaches its midpoint before age five (Bloom, 1964). This means that by kindergarten a child has passed the optimum learning period. Using this rationale, environment would have its greatest effect on a characteristic during the period of its most rapid development. Some educators urge the development of nursery schools and day care centers for culturally deprived children which tend to emphasize apperception through exposure to a wide variety of objects and circumstances, and in which programs focus on accurate pronunciation and the structure of language (Hunt, in Passow, et.al., 1967). Other educators (Weikart & Lambie, 1969) emphasize programs which train teachers to work with mothers of infants starting as early as when the child is three months of age. The rationale is, of course, that it is much easier to learn something new than it is to stamp out one set of learned behaviors and replace with a new set.

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* However, for a discussion of the findings of Dr. Arthur R. Jensen, Professor of Educational Psychology at the University of California, of possible Negro-White genetic differences, see U.S. News and World Report, March 10, 1969, "Can Negroes Learn the Way Whites Do?"

Education programs, therefore, which start before behavior and attitudes have become fixed, seem a logical direction in which to move. This is not to say, however, that there cannot be changes made in a particular characteristic at almost any point in the life of an individual. Nevertheless, as the characteristic becomes stabilized, the amount of change possible decreases, and more and more powerful environments and increased efforts are required for a given amount of change. In addition, change of a stabilized characteristic will be made at much greater emotional cost to the individual. Bloom (1964) concludes that it is less difficult for both the individual and society to bring about a particular type of development early in the history of an individual rather than at a later point.

The ramifications and implications to those interested in compensatory education are obvious. Educational remedies are believed to be more effective and efficient when administered at an early point in a child's life.

David Ausubel (in Passow, et.al., 1967) has contributed regularly to the body of knowledge and understanding in the field of education and has provided new insight into the problem of retardation of cognitive development. Ausubel accepts the fact that home environments with little or no educational tradition can promote failure in and alienation from the school. Further, impoverished intellectual environment can give rise to retardation in cognitive development and to a loss of motivation to succeed in academic endeavors.

Many educators believe that new intellectual development and growth arise from existing actualized capacity, and that deficits incurred from past deprivation tend to increase cumulatively and to lead to permanent retardation. Ausubel believes that it is possible to modify children's intellectual ability through experimental and motivational factors. However, he believes that the "plasticity" of intelligence tends to decrease with age. This is to say that as a child ages, such factors as interest, ability, success, failure experiences, and cultural expectation tend to form a set within the preadolescent and adolescent child; in Ausubel's opinion, failure in developmental actualization is irreversible and cannot be compensated for later, irrespective of the amount of hyperstimulation that is applied.

Ausubel believes an enriched program of preschool education can play a more important part in preventing language retardation and the attendant ramifications for school learning. Such programs develop language acquisition through reading and talking to children---thereby providing an acceptable model of speech and supplying corrective feedback with respect to grammar and pronunciation. Emphasis needs to be given to developing listening, memory, and attentive skills.

Ausubel indicates that teaching strategies for educationally deprived children should provide learning materials aimed at the student's existing state of readiness; moreover, emphasis should be placed on providing the necessary foundation for successful learning by seeing that ongoing tasks are mastered before new tasks are introduced. In this way, the student is helped not only to develop confidence in his ability to learn, but is prevented from being exposed to tasks for which he is unready to learn.

Under the Elementary and Secondary Education Act of 1965, and the Economic Opportunity Act of 1964, federal government funds have been channeled into compensatory education for children of low-income families. These funds have provided one means of attempting to compensate the socially disadvantaged child for handicaps that are due to his family situation and life style. Title I funds are increasingly geared to the younger child, taking cognizance of the findings of child development specialists who believe that one human characteristic is built on the base of other characteristics which precede it in development and, in turn, influence and determine the nature of later developments. Follow Through is one of these programs, and a discussion of this project as it is organized on both the national and the local level is presented in the following section.

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NATIONAL AND LOCAL ORGANIZATION OF FOLLOW THROUGH

The National View

Federal funds have been made available in recent years to assist local school systems develop specific programs focusing on children from socially and economically disadvantaged families. The Follow Through program was authorized under Title II of the Economic Opportunity Act, and is administered by the U.S. Office of Education at the national level.

Section 222(a) of the Economic Opportunity Act, P.L. 90-22 authorizes:

> A program to be known as "Follow Through" focused primarily on children who were previously enrolled in Head Start or similar programs and designed to provide comprehensive services and parent participation activities . . . which the Director finds will aid in the continued development of children to their full potential. . . .

Research findings indicate that the school, the family, the neighborhood and the community, four aspects of a child's environment, affect his learning capability and should be considered in the development of Follow Through programs. To that end, comprehensive services are to be provided not only in the area of instruction, but in addition in the areas of nutrition, health (dental and medical), social service, psychological service, parent involvement activities, and staff development. The program is designed to: (1) maintain the gains registered in Head Start, (2) incorporate the "best" of Head Start into the primary grades (kindergarten through third grade), (3) test the validity and effectiveness of several instructional models developed by universities and Research and Development Institutions, and (4) improve the manner in which disadvantaged children are taught. At the present time, there are 91 approved programs located in 70 communities across the country involving approximately 16,000 children.

Local Organization

Program Objectives

The program objectives of the Wichita Follow Through program are stated in the Application for Federal Assistance 1968-69, dated April 15, 1968, page six, and are as follows:

1. To develop and improve the means for early identification of children's needs and abilities, and to study ways of more effectively meeting needs and developing abilities.

2. To enable each pupil to develop, according to age and ability, the following:

    auditory, visual, and visual-motor skills
    motor coordination and manipulative skills
    oral and written language skills
    self-expression with verbal and non-verbal media
    listening skills and attention span
    awareness and acceptance of self
    initiative and aspirational level
    self-direction, independence, and acceptance of responsibility
    interpersonal relationships with others, including those with contrasting backgrounds
    interest level and curiosity
    understanding of the environment and the relationships of self to the environment
    conceptualization and readiness for more formal instruction
    physical health including dental and nutritional

3. To provide continuation and expansion of children's learning experiences begun in the pre-school child development program in order to provide for optimal educational development.

4. To effectively utilize teachers, assistants, specialized services personnel, parents, and others in the educational process and in closing the gaps between school, home, and community.

5. To develop a comprehensive and continuing program of staff and parent development in the education of young children.

6. To provide comprehensive specialized services including psychological, social, medical, dental, and nutritional services to children and their families.

The following institutional changes were stated as objectives of the program (page seven):

1. To organize an instructional program---different from the present one---for disadvantaged primary pupils.
2. To involve parents more intimately and effectively in the educational process.
3. To incorporate a broad, comprehensive set of services into the educational program of the school.
4. To transfer the best practices of Head Start into primary grades.
5. To utilize an Advisory Committee as a planning, evaluation and program resource.
6. To cooperate with the CAA in parent participation, staff development, and other components.

The Lassar Gotkin model approved by the National Follow Through Program was selected to provide a sequenced approach to learning. However, when this model became unavailable during the current year, Wichita developed and implemented its own instructional "model," a variation and synthesis of local views about early childhood education. The Wichita Public Schools provide a planned program of kindergarten instruction for five year old children. The school experience for regular kindergarten children is a five day a week three-hour half-day session. A kindergarten guide prepared by the curriculum division is used as a program base and emphasis is placed on the individual's progress within the total group structure. The program has broad goals in the social, emotional, physical and intellectual aspects of child growth and development. The average kindergarten day is divided into four broad blocks of time:

1. Free time, in which the child selects his activity from a

wide variety of materials. Self-chosen activities give children the opportunity for growing in their ability to work and play together.

2. Language development activities where vocabularies are enlarged and concepts are formed. This is usually a teacher-directed activity involving total group participation. Activities in arithmetic, science, and social studies usually furnish the subject matter for language development.

3. Physical activities---outdoor play, rest time, rhythm and snack time.

4. Story time---when children learn to enjoy and appreciate literature. Through dramatization and other related activities they interpret their world and build foundations for future learnings.

The planners of the Wichita Follow Through project determined in late fall, 1968, to utilize an extended kindergarten program, implementing the regular kindergarten program and giving greater emphasis to language and concept development, field trips, and manipulative toys. In addition, the Gotkin matrix board, Peabody kits, and other program aids were used by teachers and pupils. Extra equipment and supplies were provided Follow Through classrooms, such as tape recorders, games, and toys.

Pupil Selection and Project Organization

Of the 241 children enrolled in the 1967-68 full year Head Start, 101 were chosen to participate in the 1968-69 Kindergarten Follow Through project. The selection was random and stratified by race (54 percent nonwhite, 46 percent white) and age (a minimum of five years as of October, 1968). Low-income children were bused to four elementary schools located in a variety of socioeconomic neighborhoods on the periphery of the city, where they were mixed in seven classrooms with neighborhood children. The organizational structure for Follow Through developed from the premise that a heterogeneous environment, encompassing a broad range of social, economic, and ethnic patterns, is an effective scheme for maximizing educational opportunities of both advantaged and disadvantaged pupils. Classroom composition will be discussed in a later section. The kindergarten "day" for low-income children was extended to 2:00 p.m. Hot Lunch (Type A) was served to low-income children, and both neighborhood and low-income children received morning snacks of cookies and milk and/or juice. One of the four elementary schools (designated Title I) served breakfast to low-income children.

Staffing patterns were the same (with one exception) in all classrooms; that is, a certificated kindergarten teacher was assisted by a teacher aide (paraprofessional). In only one classroom a "regular" kindergarten teacher instructed the morning class of low-income and neighborhood children. In the afternoon, the same teacher aide and a Follow Through teacher met with the low-income children.

The Coordinator of the Kindergarten Follow Through program was responsible for the overall implementation and operation of Follow Through and was subordinate to the administrative direction of the Director of Compensatory Education in the Local, State, and Federal Relations Division. Curriculum advice and support was provided by the Coordinator of Primary Education.

The Supervisor of Social Services and Parent Activity (SSSPA) provided the bridge between school and family. The work assignment of the SSSPA was to help low-income families improve the quality of family living, improve the families' ability to utilize resources in the school and the community, and improve the educational environment of the children and family during nonschool hours.*

Home visits were made, records kept, and referrals rendered to clinics such as the Diagnostic Center, Public Welfare Department, Local Housing Authority, Family Consultation Service, Salvation Army, Family Planning Division of the Public Health Department, Red Cross, and to other medical, dental, and psychological clinics. The Follow Through Coordinator and the SSSPA, (the SSSPA was responsible to the Coordinator), helped plan and implement meetings aimed at education and recreation interests of parents of Follow Through children.

In terms of psychological services, the Wichita Guidance Center provided as needed supportive and consultative psychological services to Follow Through staff, Follow Through pupils, and their families. Further, schools in which Follow Through classes functioned were provided a minimum of a full day more school counselor service per week. Counselors, in addition to consideration of Follow Through school and family problems, assisted in the achievement testing of Follow Through pupils.

The health component of the Follow Through project included a plan for medical and dental services. Physical examinations were provided those Follow Through children who had not been examined in the past

*Application for Federal Assistance for the Operation of a Follow Through Program, 1968-69, p. 20.

year. Dental inspection was given a majority of Follow Through children and both medical and dental referrals were made for those children who developed special physical problems.

The nutrition program strived to provide a balanced daily diet. As stated earlier, Follow Through pupils were served regular Type A lunches and appropriate snacks daily. One elementary school (Title I) served breakfast to Follow Through children.

Community Participation

Follow Through is one of the special emphasis programs within the Community Action title of the Economic Opportunity Act. One of the aims of Community Action is to give low-income people the opportunity to understand that they can have control over facets of their lives that affect their well-being. Studies show that poor people tend to develop a fatalistic approach to life, to feel that no matter what they do or how hard they try, their "lot" is to remain helpless on the ever-surging seas of existence. Follow Through provides a supportive setting in which low-income people have a voice in handling their own affairs in determining the priority of their needs and in establishing the ways in which those needs shall be met. The aim of Community Action is to involve parent representatives of relevant community agencies and other individuals who have concern for the poor in project planning and operation. Follow Through attempts to draw the school and the community closer in order that the child, the home, and the community benefit.

Parent participation in the Wichita Follow Through project was set forward in four areas.

1. Policy Advisory Committee: The policy advisory committee was formed and comprised of ten parents of Follow Through children. Representatives from Public Welfare and Community Action Program (CAP), along with the Director of Compensatory Education LEA, the Coordinator of Primary Education, the Follow Through Coordinator, and the SSSPA met with the PAC at monthly meetings to make decisions about the nature and operation of the project and to suggest activities that would be of interest to parents. The PAC plays an important part in implementing plans that affect the Follow Through program and, therefore, makes significant contributions to their children's total development in addition to helping the staff become more cognizant and responsive to the goals of the parents and community which can then be translated into meaningful project activities.

2. Parent Meetings: Parent educational and recreational activities may be developed by the PAC and Follow Through staff in order to interpret the organization and goals of the Follow Through project, and to provide assistance in child rearing techniques and homemaking.

3. Teacher Home Visits with Parents: Follow Through teachers and teacher aides are given release time and are encouraged to visit the homes of their Follow Through pupils in order to establish closer relationships with parents which, in turn, could serve to benefit the child, the home, and the Follow Through program.

4. Parent Participation in the Classroom and School: Parents are encouraged to volunteer to serve in classrooms assisting in instructional activities, snack and lunch helpers, and on field trips. The value in terms of greater involvement by parents in Follow Through as a means of stimulating further interest and support of the project is a major concept of the Follow Through program.

COMPARISON GROUPS AND MEASURES USED

The overall objective of the 1968-69 Follow Through Project evaluation was to assess the impact of the Follow Through program on pupils and parents. In order to implement the evaluation, five comparison groups were designated, and several instruments were used to obtain data.

Comparison Groups

Experimental group (HSFT). A stratified random selection of 40 low-income pupils enrolled in Follow Through was made. All low-income Follow Through pupils participated in Full Year Head Start.

Major comparison group (HSNFT). This group was comprised of low-income children who participated in Full Year Head Start but were not selected for Follow Through. They attended the neighborhood school.

Follow Through classmates. This group consisted of a random selection of 40 neighborhood kindergarten pupils assigned to classes in which low-income Follow Through pupils were placed.

Low-income kindergarten pupils attending Title I schools (NHSNFT-LI). A selection of low-income kindergarten pupils who had not participated in Full Year Head Start was made. These children attended the neighborhood school.

Regular kindergarten pupils (NHSNFT-NLI). A random selection of non low-income pupils was made. These children attended the neighborhood school.

Measures Used

Follow Through classes were described in terms of numbers of pupils per classroom, mean chronological age, race, sex, and percentage of Follow Through pupils.

The results of Follow Through teacher interviews yielded data regarding teacher education attainment and work experience, their perceptions of major accomplishments and problems, suggestions for improvement of the Follow Through project, and their perceived efficacy of instructional materials, equipment, and job training. Pupil classroom interaction based on teacher observation was reported.

Investigation of Follow Through parent participation in school, classroom, and other school related activities via records kept by teachers and Follow Through staff was noted.

The results of interviews with parents of low-income Follow Through children were reported and contrasted with the results of interviews of parents of the major comparison group (HSNFT). Information related to the home environment was obtained and reported.

The results of the Illinois Test of Psycholinguistic Abilities (ITPA), a measure of perceptual development and language behavior, administered on a pre and posttest basis to the experimental group and HSNFT, were reported.

The Metropolitan Readiness Test, a measure of readiness for first grade schoolwork, was administered to all five comparison groups; the results were compared and reported.

The Wichita Guidance Center Kindergarten Check List provided a measure of lack of adjustment to the school situation. The instrument was administered to all five comparison groups. The results of the findings were reported.

Changes in pupil height and weight measurements were reported for all five comparison groups.

The major hypothesis underlying this evaluation was that there would be no statistically significant differences in the results of tests when comparing the experimental group and HSNFT.

FINDINGS

Parent Interviews

In April of this year, research staff members conducted a series of 67 one-hour interviews with parents or relatives of children in two of the five comparison groups: the experimental group (HSFT) and HSNFT. The goal of these interviews was to learn about the home environment of the children in order to gain further insight into pupil performance. The interview schedule has been placed in the Appendix. All families interviewed were reported to have met the criteria for disadvantaged (using anti-poverty guidelines) in the fall of 1966 on pupil entrance into Full Year Head Start.

Socioeconomic Status

One of the best predictors of educational achievement is the socioeconomic status of the family breadwinner. Socioeconomic status was determined from interviews with parents and by utilizing the stated occupation and education of the family breadwinner to estimate the relative social positioning. The Index of Socioeconomic Status, developed by Martin Deutsch at the Institute for Developmental Studies in New York City (revised, 1965), makes the assumption that

1) certain characteristics of the head of the family within any family unit will denote the social status, and

2) that prestige within a community is accorded on the basis of an individual's occupation and education.

Social Class Level I (SES I) is characterized by households in which the main wage earner is unemployed or is employed in either an unskilled or semiskilled job. His educational attainment is likely to range below the ninth grade level.

Social Class Level II (SES II) is characterized by households in which the wage earner is employed in a semiskilled, clerical, sales, or, at most, a skilled job. He is likely to have had an education ranging from the seventh or eighth grade up to completing high school.

Social Class Level III (SES III) is characterized by a household in which the main wage earner is likely to hold a skilled, professional, or managerial position. His education is likely to range from high school graduation up to college graduation or graduate training.

Low SES and poverty are not always positively correlated, though in many cases they are. Large families, for example, enable a family with an SES III to meet antipoverty guidelines and, therefore, eligibility for participation in the Follow Through project.

A high percentage of both experimental and HSNFT families fall into the lowest SES level (I), as is indicated in Table 1 . Eleven percent more Follow Through as compared with HSNFT parents fall into the SES III category.

TABLE 1

SES BY PERCENTAGES (EXPERIMENTAL AND COMPARISON GROUPS)

Group	I	II	III
Experimental (HSFT) N=36	61	25	14
Comparison (HSNFT) N=31	74	23	3

However, no statistically significant differences were found when comparing the two groups (SES categories II and III were combined and the Chi-square test performed).

Education Attainment of Parents

The data summarizing educational level of parents is included in Table 2 . The high percentage of fathers in both groups were reported as having not completed high school. However, four percent more of the fathers in the experimental group indicated high school graduation; three percent more indicated going to college, and six percent more indicated they had graduated from college. No significant difference in the numbers of high school graduates, some college, and college graduates was found between the education levels of the mothers or fathers of the experimental group and HSNFT.

The high percentage of mothers in each group indicated they did not graduate from high school. However, 12 percent more mothers in the experimental group said they were high school graduates and 11

TABLE 2

PARENT EDUCATION (HIGHEST GRADE COMPLETED)

			0-4	5-6	7-9	Some H.S.	H.S. Grad.	Some Coll.	Coll. Grad.	Post Grad.	No Info.
FATHER	Exper. N=36	N	0	2	5	6	5	2	2	0	14
		%	0*	6	14	17	14	6	6	0	39
	HSNFT N=31	N	1	2	0	5	3	1	0	0	19
		%	3	6	0	16	10	3	0	0	61
MOTHER	Exper. N=36	N	0	1	10	10	9	5	0	0	1
		%	0	3	28	28	25	14	0	0	3
	HSNFT N=31	N	1	0	8	15	4	1	0	0	2
		%	3	0	26	48	13	3	0	0	6

* Percent is rounded to the nearest whole number.

percent more of the mothers in the experimental group indicated they had been to college. In the main, on the basis of parent formal education, the experimental and comparison groups seem to be comparable. The higher percentage of "no information" on father's education level in the HSNFT group may be indicative of one or more factors. It is possible that the HSNFT was less knowledgeable in this area than the experimental group. It is also possible that members of a "project" felt more of a commitment to respond to all questions in a positive way. The large number of responses of no information may be indicative of family disorganization.

Source of Income

TABLE 3

PRIMARY SOURCE OF INCOME

	Experimental		HSNFT	
	N	%	N	%
Father	15	42	9	30
Mother	1	3	1	3
Both Equally	1	3	1	3
Public Welfare	19	53	20	63

Percent rounded to nearest whole number.

Table 3 summarizes findings regarding the primary source of income of families of the experimental and HSNFT groups. Fifty-three percent of the families of experimental subjects rely on public aid, while 63 percent of the families of HSNFT were dependent on public aid for their source of income. Family disorganization is highly correlated with low income. Some authorities believe that the present system of public assistance tends to make family life, already unstable by virtue of lack of education, job skills, and financial capability, even more unstable in awarding welfare payments (through ADC) to those families in which the father is not present.

Of the 36 experimental subjects interviewed, 50 percent of the fathers were reported living at home; 39 percent of the 31 HSNFT fathers were reported living at home.

Size of Families

The mean number of siblings under eighteen years of age in the experimental group was 5.2; for the HSNFT, the mean was 5.9. The mean number of siblings under seven years for the experimental group was 2.5; for HSNFT the mean was 3.1. It appears that both groups have large families, though the HSNFT has very slightly younger families.

Incidence of Overcrowding

The mean number of persons per room living in the homes of the experimental group was 1.255; for the HSNFT, 1.486.

The U.S. Bureau of the Census considers a figure over one person per room (1.0) as indication of overcrowding. Using this criterion, the data affirm overcrowding as a characteristic of both the experimental and comparison groups.

Occupation of Main Support of the Family

Data on the occupation of the main support of the family are presented in Table 4.

TABLE 4

OCCUPATIONAL RATING OF MAIN SUPPORT OF THE FAMILY*

Rating Assigned Occupation	Experimental N=36		HSNFT N=31	
	N	%	N	%
1	16	44	18	58
2	3	8	2	6
3	3	8	5	16
4	7	19	3	10
5	4	11	2	6
6	1	3	0	0
7	2	6	1	3

*Ratings are based on the Institute Index of Social Class---Institute for Developmental Studies (Revised 1965), N.Y.C., N.Y.
Percent rounded to nearest whole number.

Occupational categories have been grouped into clusters; each has a prestige rating. The occupations clustered in category one are unskilled occupations or unemployed. Forty-four percent of the experimental group fall into the lowest category, and 58 percent of HSNFT fall into the same category. Skilled occupations are represented in the upper categories. Twenty percent of the experimental group were located in five, six, and seven, whereas nine percent of the comparison group held occupations rated in these same categories. The experimental and HSNFT groups appear to be comparable in terms of high percentages falling into the unskilled job category.

Additional Findings from Interviews of Parents

Very high percentages of respondents from both groups indicated:

1) aspirations for their child to finish high school and/or attend college.

2) their children ate breakfast at home, which, in the main, consisted of cold cereal and milk.

3) their children checked out school library books and read them.

4) their children talked about happenings at school almost daily.

5) positive feelings about racially-integrated education opportunities.

The respondents of the experimental group were unanimous in their feelings of support for the Follow Through project. They were in the main unsure as to where they heard about Full Year Head Start originally (a prerequisite for participation in Follow Through).

One third of the Follow Through respondents indicated a problem connected with riding the bus to school.

Overview of Interviews with Parents

Though we often associate severe deprivation with big city slum dwelling, this series of interviews affirmed that indeed the same kinds of gross and multiple problems exist within the families of the poor in our own community as do in large urban areas. Family disorganization, low education level of parents, low job skills, large families living in overcrowded conditions, would seem to augur poorly for any public school program that does not include heavy inputs in parent involvement and education.

Description of Classrooms

In the fall of 1968, 101 low-income Follow Through pupils were bused to four elementary schools located in neighborhoods of varying socioeconomic composition (see Figure 1 which shows the residence and school distribution of Follow Through pupils). Low-income Follow Through pupils were placed in seven classrooms to which neighborhood kindergarten pupils had also been assigned. National Follow Through Guidelines strongly urged a racial and socioeconomic mix in each classroom. This was in keeping with local disposition and allowed for the testing of the premise that peer relationships in the classroom constitute an effective means by which disadvantaged pupils can be accelerated in their academic achievement without negatively affecting the achievement of children from more affluent backgrounds.

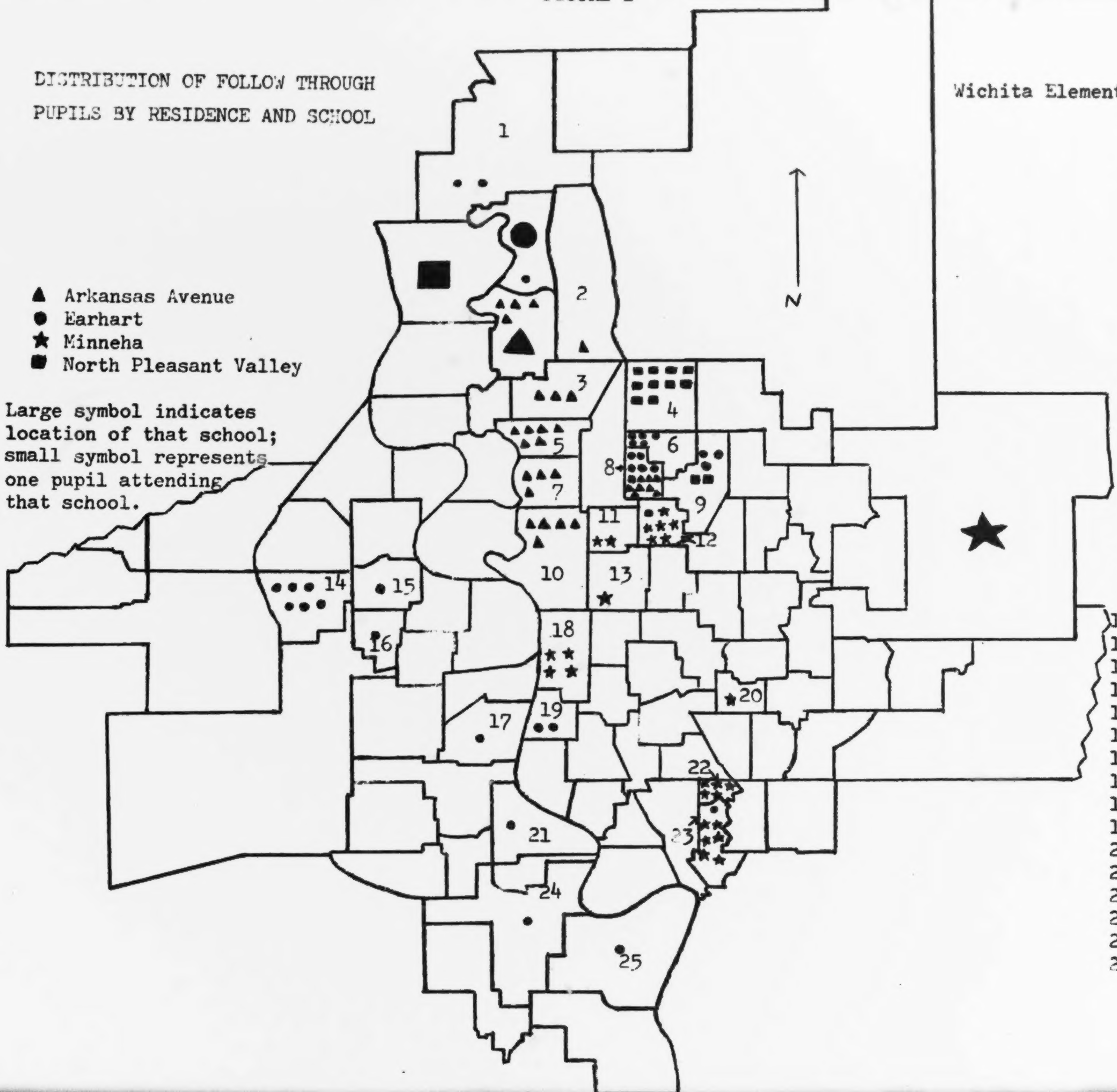
Table 5 provides a description of enrollment statistics for Follow Through pupils for the fall of 1968 and spring of 1969 according to group, class, and school. Table 6 provides a description of Follow Through classrooms according to race and sex composition, percent HSFT and classmates for the fall 1968 and spring 1969.

Follow Through classrooms ranged in size from 20 (Spring, IB) to 30 (Spring, IVG) pupils; the percentage of HSFT pupils per classroom ranged from 37 percent (Fall, IVG) to 71 percent (Fall, IB); the percentage of nonwhite HSFT pupils per classroom ranged from 43 percent (Spring, IB) to 92 percent (Spring, IVG). Only one classroom included a nonwhite neighborhood (Classmate) pupil (IA); the percentage of male HSFT pupils per classroom ranged from 44 percent (Spring, IIIE) to 76 percent (Fall, IB); the percentage of male neighborhood pupils

FIGURE 1

DISTRIBUTION OF FOLLOW THROUGH
PUPILS BY RESIDENCE AND SCHOOL

Wichita Elementary School Districts
1968-69



▲ Arkansas Avenue
● Earhart
★ Minneha
■ North Pleasant Valley

Large symbol indicates location of that school; small symbol represents one pupil attending that school.

Sending School

1. Riverview
2. Bridgeport
3. Finn
4. Mueller
5. Waco
6. Isley
7. Irving
8. Little
9. Fairmount
10. Park
11. Dunbar
12. Ingalls
13. Washington
14. Dodge
15. Field
16. Lawrence
17. Stanley
18. Lincoln
19. Harry St.
20. Munger
21. Knight
22. Brookside
23. Rogers
24. Enterprise
25. Funston

TABLE 5

ENROLLMENT STATISTICS FOR FOLLOW THROUGH PUPILS, ACCORDING TO GROUP, CLASS, AND SCHOOL

			FALL, 1968			SPRING, 1969		
School	Class	Group	Group Subtotal	Class Subtotal	School Subtotal	Group Subtotal	Class Subtotal	School Subtotal
I	A	FT	16	25	49	15	26	46
		CL	9			11		
	B	FT	17	24		14	20	
		CL	7			6		
II	C	FT	17	30	57	14	26	53
		CL	13			12		
	D	FT	15	27		14	27	
		CL	12			13		
III	E	FT	13	25	48	9	23	45
		CL	12			14		
	F	FT	13	23		11	22	
		CL	10			11		
IV	G	FT	10	27	27	12	30	30
		CL	17			18		
TOTALS			181	181	181	174	174	174

TABLE 6

FOLLOW THROUGH CLASSROOMS ACCORDING TO RACE, SEX, AND DISTRIBUTION: FALL, 1968 AND SPRING, 1969

School	Class	Group	FALL, 1968						SPRING, 1969					
			% White	% Non White	Sex %M	Sex %F	% HSFT	% Clsmt.	% White	% Non White	Sex %M	Sex %F	% HSFT	% Clsmt.
I	A	FT	44	56	50	50	64	36	47	53	53	47	58	42
		CL	89	11	89	11			91	9	18	82		
	B	FT	53	47	76	24	71	29	57	43	71	29	70	30
		CL	100	0	29	71			100	0	33	67		
II	C	FT	53	47	53	47	57	43	43	57	50	50	54	46
		CL	100	0	54	46			100	0	50	50		
	D	FT	47	53	53	47	56	44	50	50	64	36	52	48
		CL	100	0	58	42			100	0	62	38		
III	E	FT	54	46	54	46	52	48	33	67	44	56	39	61
		CL	100	0	50	50			93	7	50	50		
	F	FT	46	54	62	38	57	43	36	64	64	36	50	50
		CL	100	0	40	60			100	0	36	64		
IV	G	FT	10	90	60	40	37	63	8	92	67	33	40	60
		CL	100	0	47	53			100	0	33	67		

(Classmates) ranged from ten percent (Fall, IA) to 62 percent (Spring, IID).

It is interesting to note, aside from the wide pupil variability, in terms of percentage of HSFT pupils per room, percentage of nonwhite pupils per room, and percentage of male pupils per room, that classroom IB in the spring of 1969, of all Follow Through classrooms, had the smallest (total) number of pupils (20), the highest percentage of HSFT pupils (70 percent), and the lowest number of nonwhite HSFT pupils.

Classroom IVG, on the other hand, in the spring of 1969 had the greatest (total) number of pupils (30), the second lowest percentage of HSFT pupils (40), and the highest percentage of nonwhite HSFT (92) of all other Follow Through classrooms.

It will be important to take note of the results of achievement tests such as the Metropolitan Readiness Test and to observe the possible effects of varying classroom distribution of pupils in terms of the aforementioned information. Conclusions will be provisional, however, for no pretest data are available to illuminate gains.

Table 7 summarizes HSFT pupils and FT Classmates enrollment gains and losses for the spring of 1969.

TABLE 7

HSFT AND FT CLASSMATES:
ENROLLMENT GAINS AND LOSSES, SPRING, 1969

	HSFT	FT Classmates	Total
Fall	101	80	181
Spring	89	85	174
Loss or gain	12 (loss)	5 (gain)	7 (loss)

The loss of HSFT pupils is attributed to pupil transfers into other kinds of classrooms (such as an Emotionally Disturbed classroom), to a regular classroom, or out of the Wichita school system.

Table 8 summarizes the five comparison groups in terms of sex, race, mean chronological age, and mean language age.

TABLE 8

SEX, RACE, CHRONOLOGICAL AGE, AND LANGUAGE AGE, BY GROUP

Group	Sex (%) M	Sex (%) F	Race (%) White	Race (%) Nonwhite	Mean Chron. Age (in mo.)	Mean Lang. Age (in mo.)
Experimental (HSFT) N=42	45	55	45	55	68*	62**
HSNFT N=43	47	53	23	77	67	62
FT Classmates N=40	35	65	95	5	66	no data***
NHSNFT (LI) N=52	46	54	36	64	66	no data
NHSNFT (NLI) N=41	46	54	93	7	67	no data

*Chronological age adjusted to November 1, 1968.
**As measured by Language Age Total ITPA (Pretest)
***ITPAs were administered only to the experimental (HSFT) group and the major comparison group (HSNFT).

As stated previously, all groups represent selections from the total population of the group.

The chronological age of the experimental subjects ranged from 61 months to 81 months; for HSNFT subjects, 60 months to 79 months; for FT Classmate subjects, 60 months to 74 months; for NHSNFT (LI) subjects, 60 months to 73 months; for NHSNFT (NLI) subjects, 60 months to 73 months. The mean chronological age maximum variation was two months, an indication of group comparability in terms of chronological age.

Mean language age was derived from the language age total of the Illinois Test of Psycholinguistic Ability (pretest), which reportedly correlates highly with the Binet and WISC.* In terms of total language age scores, the experimental and HSNFT groups were equivalent.

Attendance

Table 9 describes attendance ratios by group. The attendance ratio is equal to the number of days present divided by the number of days possible to be present.

TABLE 9

ATTENDANCE RATIOS BY GROUP

Group	N	Days Present	Days Possible	Ratio
Experimental (HSFT)	40	5747	6564	.8755
HSNFT	33	5459	5909	.9238
FT Classmates	42	6825	7456	.9153
NHSNFT (LI)	52	7836	9183	.8533
NHSNFT (NLI)	41	6684	7128	.9377

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*See Alfred Hirshoren, "A Comparison of the Predictive Validity of the Revised Stanford-Binet Intelligence Scale and the Illinois Test of Psycholinguistic Abilities," Exceptional Children, March, 1969, p. 517.

A ratio of 1.0000 is equal to perfect attendance. The 1968-69 attendance ratio for all kindergarten pupils in the city was .9251. It is interesting to note that Follow Through pupils attend school better than low-income children who have not attended full year compensatory programs (NHSNFT-LI), but less well than those who participated in Head Start but were not selected for Follow Through. Further research is needed in this area to determine the effect of busing, integrated school experiences, and other factors.

The Nutritional Component

As stated in a preceeding section, the nutritional component of the Follow Through project was designed to develop more fully the physical resources each low-income child brought to the learning process, through

1. a class "A" hot lunch (daily)
2. morning snacks of juice and/or milk and cookies
3. breakfast (at one school---the only Title I)
4. nutrition education

Generally speaking, the research staff observed teachers and teacher aides utilizing lunch and snack time as a means of accomplishing goals other than the consumption of food. For example, mealtime provided the avenue for further pupil development of language and social skills through discussions of food textures, tastes, smells, colors, and origins, as well as bringing a new appreciation for unfamiliar foods. Children were helped to appreciate the role of nutrition and food in physical, mental, and emotional development. On occasion, they helped set tables, serve, and clean up.

In addition, parents of Follow Through pupils attended an educational meeting at which a nutritionist shared recipes and prepared food, as well as providing information about adequate diets and meal planning.

Pre and post height and weight measures were taken on all children in the experimental group, as well as the four comparison groups. The data in Table 10 summarize the findings. Gains in height ranged from

TABLE 10

MEAN HEIGHT AND WEIGHT MEASUREMENTS (DECEMBER AND MAY DATA) BY GROUP

Group	Number of pupils		Height in inches		Gain in height	Weight in pounds		Gain in weight
	Dec.	May	Dec.	May		Dec.	May	
Experimental	41	34	44.9"	45.8"	.9"	45.4 lbs	47.2 lbs	1.8 lbs
HSNFT	42	41	46.3"	46.3"	0"	45.6 lbs	47.7 lbs	2.1 lbs
FT Classmates	39	33	44.6"	45.1"	.5"	43.0 lbs	45.0 lbs	2.0 lbs
NHSNFT (LI)	41	43	44.4"	45.6"	1.2"	43.0 lbs	45.8 lbs	2.8 lbs
NHSNFT (NLI)	33	36	45.6"	46.3"	.7"	46.3 lbs	47.6 lbs	1.3 lbs

0 to 1.2 inches. Gains in weight ranged from 1.3 pounds to 2.8 pounds. It is interesting to note that the NHSNFT (LI) group weighed the least and measured the shortest in December. In May, this group showed the greatest gains in height and weight. In the light of the nutritional component attached to the Follow Through program, we would not have anticipated these results. More research is needed.

It is difficult to assess the effect of daily hot lunches and snacks on the learning ability of the members of the experimental group of children. In addition to assisting in providing a balanced diet, which many low-income children reportedly do not receive, mealtime did provide for opportunities such as broadening children's experiences by introducing them to a variety of foods, and providing opportunities to further develop language and social skills.

Parent Involvement

A basic tenet of Follow Through is that parents have both the right and the responsibility to share in determining the nature of their children's education.* National guidelines suggest that the benefits are two-fold in providing parents opportunities to take an active role in all aspects of the Follow Through project.

> Interaction between parents and Follow Through staff--in homes, classrooms, and elsewhere in the community can
> 1) help parents learn how they can lend support and influence the program, and on their own contribute more fully to their child's development and
> 2) help staff become more responsive to the needs and goals of the parents and community and translate such goals into meaningful project activities.

If society is viewed as an immense social system which is comprised of a myriad of interdependent parts, it can be seen then that school and family are necessarily interrelated; i.e., what affects one affects the other. It has long been known by educators that to consider the child in the vacuum of the school without consideration of social factors such as home environment and cultural characteristics, is to limit the extent to which education can have impact. This fact is so crucially significant in regard to disadvantaged children that it is a major focal point in the Follow Through project.

There are four distinct areas of parent involvement to be considered. They are:

1. Home visits by Follow Through staff
2. Parent participation in the classroom as observers and/or

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*Follow Through Guidelines, February 24, 1969.

volunteers, and school conferences with teachers.

3. Parent educational and social activities which parents help develop.

4. Participation in the process of making decisions about the nature and operation of the project through meetings of the Policy Advisory Committee and other parent groups.

Each of these areas of parent involvement will be discussed.

Home Visits by Teachers

Follow Through teachers and teacher aides were given release time daily from 2:30 p.m. to 3:45 p.m. at which time home visits could be made.

Follow Through teachers reported a total of 247 home visits totaling 118 hours. These figures represent estimated time in that complete records of home visits were not always kept.

School Visits by Parents

Teachers also reported a total of 29 visits by parents to the school for purposes of conferences with the teacher. A total of 30 hours were recorded in this area. Three teachers did not report data in this category.

A total of 56 visits constituting 124 hours were reported by teachers denoting parent visits to the classroom for purposes of observation and/or assisting in the classroom (data were not available from three teachers).

Parent Educational and Community Activities

The administrative staff of the Follow Through project implemented a plan for parent educational and social activities which parents helped to develop. In addition, individual teachers sponsored meetings to which parents were invited. A total of 12 such meetings were recorded with 284 persons contributing 583 man hours. Ninety-four percent of the parents of Follow Through children attended at least one of these meetings.

The Policy Advisory Committee

The function of the Policy Advisory Committee is to participate in the process of making decisions about the nature and operations of the Follow Through project through frequent meetings of the committee. Ten parents of low-income Follow Through pupils, representatives from CAP, and Public Welfare constituted the voting membership. Meetings were scheduled monthly for the purpose of reaching the following goals:

1. To help advance the Follow Through project in any way possible.

2. To discuss and accept or reject any ideas on matters concerning any aspect of Follow Through.

3. To create better understanding and communication between parents, teachers, administrators, and the children.*

Major efforts of the committee this year were directed toward the solution of bus problems through the purchase of services of another school bus, planning social and educational events to which parents as a group and children accompanied by parents were invited, and approval of the 1969-70 curriculum model.

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*Follow Through Application, 1969-70, April 22, 1969, p. 33.

The following summarizes parent involvement.

Activity	Number of Contacts	Total Hours
Home visits by the teacher	247	118
Parent participation at school (as volunteers, observers, at conferences with teacher)	85	154
Parent participation (12) educational or social meetings	284	583
PAC meetings (9)	108	216
Total	724	1071

The figures presented in this section represent a low estimate of parent involvement in that data were not readily available and in some instances unavailable from teacher records. No attempt has been made to examine the quality of contact.

Because of the significance the National Guidelines place on the parent participation component of Follow Through, more efficient means of recording will necessarily need to be devised. It should be noted again that 94 percent of Follow Through families were represented at the social/educational meetings, a figure which to those who have served as community organizers in a low-income area such as this would seem very remarkable.

Teacher and Teacher Aide Questionnaires and Interviews

The following information represents a synthesis of the findings from research contact with kindergarten Follow Through teachers. Two instruments were utilized to obtain teacher comments regarding Follow Through during the school year.

1. An interview schedule formed the basis for a discussion with kindergarten Follow Through teachers in January, 1969. Interviews were conducted and taped (in order to free the interviewer from note-taking) at the four elementary schools in which Follow Through classes functioned. A teacher new to the job was not interviewed; a teacher who served as a Follow Through teacher in the morning and a regular kindergarten teacher in the afternoon was included in the interviews.

2. Questionnaires were mailed to all kindergarten Follow Through teachers in May, 1969.

Teachers are closest to "where the action is" and their comments provide a wealth of information about themselves as well as the Follow Through project. The researchers, in fielding both instruments, found administrators and respondents to be accessible and ardent in their willingness to articulate their views about the various aspects of the Follow Through program. The enthusiasm for their jobs in helping disadvantaged children develop attitudes and skills that would prove of benefit in later school years was clearly evident.

Information was obtained from tape recordings of teachers' remarks. Syntax and grammar may not be perfect, as is often the case in relaxed conversation. Attempts were made to convey the same quality of expression. Every effort possible has been made to insure the anonymity of the respondent.

Background Information

Kindergarten Follow Through teachers were asked a series of questions regarding their formal education and education related to work experience. The following represents a summary of those findings.

Teacher Distribution of Formal Education Attainment

College Degree	Number
B.A.	4
B.S.	2
M.A.	1

No teachers reported specialized training or formal education in intergroup relations, sociology, or courses dealing with low-income life styles.

Distribution of Total Years of Teaching Experience

Experience	Number
2 - 5 years	4
6 - 10 years	2
over 10 years	1

Distribution of Years Teaching Kindergarten

Experience	Number
1 - 5 years	5
6 - 10 years	2

The mean age of Follow Through teachers is slightly over 30 years. It would appear that, as a group, Follow Through teachers are young, well-qualified (though deficient in formal training in intergroup relations), and relatively new to the kindergarten teaching profession. These facts portend a creative approach to their jobs.

Pre-Service Training - Teachers

Hours	Number
6	1
15	4
0	2

Teacher Perceived Problems with Kindergarten Follow Through Pupils

The majority of teachers indicated the following as problems:

1. Discipline and acting out behavior
2. Absence due to illness and to missing the bus
3. Language communication skills
4. Attention span

On the other hand, teachers perceived the following were not problems:

1. Overall attendance
2. Absence due to weather
3. Transfers into the classroom
4. Ability of students to comprehend

> "When school started, the behavior problems were terrific---many more than in any ordinary kindergarten. It took a great deal of time, patience, and understanding, but, at the same time, firmness. As far as learning ability, I find that most of the Follow Through pupils are no different than any other five-year-olds; they are so eager to learn, but the thing that slows them down (and the entire group) is behavior problems. I feel the children do not learn until you make some progress in this area first. It has been a real thrill to see these children change their patterns of behavior and see them learning and so eager to learn."

Improvement of Pupils

Teachers were asked to rate their Follow Through group in terms of improvement in areas set forth in the program objectives.

Program Objectives for Pupil Development

To enable each pupil to develop, according to age and ability, the following:

1. auditory, visual, and visual motor skills
2. motor coordination and manipulative skills
3. oral and written language skills

4. self-expression with verbal and non-verbal media
5. listening skills and attention span
6. awareness and acceptance of self
7. initiative and aspirational level
8. self-direction, independence, and acceptance of responsibility
9. interpersonal relationships with others, including those with contrasting backgrounds
10. interest levels and curiosity
11. understanding of the environment and the relationship of self to the environment
12. conceptualization and readiness for more formal instruction
13. physical health including dental and nutritional

A majority of Follow Through teachers indicated pupil improvement in all areas of the program objective. A majority of teachers indicated great pupil improvement in oral language skills (3*), self-expression with verbal and non-verbal media (4), listening skills and attention span (5), and initiative and aspirational level (7). The largest number of Follow Through teachers (five) saw great pupil improvement in the area of awareness and acceptance of self (6), development of interest level and curiosity (10), and conceptualization and readiness for more formal instruction (12). A majority of teachers indicated less pupil improvement in the development of motor coordination and manipulative skills (2), self-direction, independence, and acceptance of responsibility (8), and understanding of the environment and the relationship of self to the environment (11).

Teacher Perceived Positive and Negative Aspects of Integrated Education

Follow Through teachers were asked their opinions concerning the positive aspects of a kindergarten program structured to provide encounters for children with others who are different socially, economically, and racially. Their responses showed, in the main, positive attitudes in assessing the rationale for integrated education.

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*Indicates the item number of the program objective

> "For neighborhood children, this may be the first contact that these children have had with children . . . of the Negro and Mexican races, but with this interaction they will learn that these people are human beings. . . . "

> "It has given these children an opportunity to get out of their neighborhood. They have come into a nicer neighborhood where they are learning from the children here, and I think the children learn from them, too. I think my neighborhood children have learned that the color of your skin doesn't make any difference."

> "One benefit of integration . . . is that they can see how like all other children they are and see how the school is like theirs, and how mothers in another school act just like their own mothers."

> "I think that when you are around people of the same social and economic conditions, and a lot of times if these aren't up to par and if the child goes to school and sees nothing else, he has nothing to grasp or reach for. I feel that if he mingles with children who come from a little better neighborhood he may set for himself a higher standard of values. . . . Instead of just sitting at home and waiting for a $400 welfare check, the child may come to realize that with a high school education he might go out and get a job that pays more than $400 and discover this is a pretty good thing."

> "It helps children understand that differences of background are normal and acceptable. . . . It helps to subtly notice that parents and children have the same needs regardless of what color they are."

> "Follow Through children benefitted from conversations with classmates in regard to language patterns."

Recent studies have indicated that 1) integrated education serves to develop attitudes appropriate to the integrated society in which students will live, and 2) children learn best from other children, and when those from a given family background are put in schools of different social composition, their achievement will be at a different level. That is to say, Negro children perform better (on the basis of what we now know) in integrated schools than in segregated schools. The effect is less for white pupils than Negro pupils; that is, school quality will make the most difference in achievement for the most disadvantaged children.

Further, segregated schools tend to perpetuate separatist, ethnocentric attitudes and values. A major part of the American Dream is that a child is helped to learn to value the worth of an individual, not on the basis of race, religion, or financial capability, but rather for what he contributes to the good of society; educational programs, therefore, should be structured to provide access to the dream by providing encounters for young people to know other children who are different from themselves.

Follow Through teachers were asked to express their opinions as to their perception of negative aspects (if any) of a kindergarten program structured to provide encounters for children who are different socially, economically, and racially. The following quotes are indicative of responses.

> "I think in many cases busing compounds and complicates the problem a bit because of a lack of supervision. When the children come in, they are pretty upset and really at each other's throats over things that happen on the bus."

> "I don't know if the children (Follow Through) benefit more in neighborhoods where there is a great difference between the SES of Follow Through pupils and neighborhood children. I cannot really see that the Follow Through youngsters gain so much with this kind of a mix. I feel they would gain much from an integrated experience with a more closely matched SES background and I would stress that this is especially the case at the kindergarten level."

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> "As far as the value of integration, I think the feelings that people get come about by the way things are presented to them. They could go into an integrated school, but if everything was mediocre--the presentation of ideas and the teaching of them--they could come out not learning any more than they could by staying in their own neighborhood with a great program which teaches them basically their own worth. I'm sure it is what they learn, what is sort of instilled into them day after day either directly or indirectly. . . ."

> "Teachers right here in our own school question the value of the program. I think the problem is they don't understand it. I am wondering if the principals are in any way told about the difference in these children as compared to children who are more normal or stable. A lot of them come from large families so they feel they must grab what they want quickly before someone else gets their share. This is their attitude in everything they do. They must be slowed down and taught respect for others. In general, there seemed to be a lack of understanding of the needs of the children from poverty homes and a lack of information about the Follow Through program, as to what it is intended to accomplish. . . ."

> ". . . the most disagreeable part of the work is the difficulty that we have getting into the homes of parents. . . . So far, the Caucasian homes are the only ones we have been able to get into. We were quite positive that the parents were home a couple of times, but would not answer the door, and I don't know how to go about doing anything about this type of thing."

> "I think the Follow Through children are more tired, though it may not entirely be caused by the longer day. It may be due to factors at home."

> "The inaccessibility of the school to parents of Follow Through children poses serious problems."

> "Children who are advantaged may be held back in progressing as fast educationally as they would. . . . Less advantaged are usually much less motivated to learn."

Teachers seemed very open in discussing their problems. Program planners may want to consider the various alternatives in overcoming the negative aspects noted by teachers in this section.

General Comments

Some general coments by teachers about Follow Through project are set forth next.

> "I feel that the smaller group gives you a better chance to know the problems of each child and how better to handle the problem."

> "The thing I am happiest about is the growth that I feel these children are making. This is a wonderful program and these children are having the opportunity to get the extra help they need to be able to cope with average children in a regular classroom and get along. They have experiences which possibly they wouldn't have in a regular kindergarten because you don't have the time. There is a much more personal touch because you have fewer and you are able to spend more time with each child as well as having an aide in the classroom. . . . I have time to contact parents and have gotten to know them and possibly understand the children's problems better."

> "I feel that if the Follow Through program is financed for four years, if these children have teachers and aides that do for them and teach them cleanliness and respect for others and the meaning of all the things the program deals with, that certainly, because this is an impressionable age, we will have made a strong contribution to the child's life after four years. Perhaps their patterns will have been well enough established that they will carry on. . . . The thing I like best about the program is that I have more time to spend with children individually. I can be alone with the child and he knows he is important to me."

> ". . . we have no set program. I think a former kindergarten teacher has a natural tendency therefore to go back and do all the things that she did with her regular kindergarten plus try to add all the benefits that an underprivileged child would naturally have to have---more language, and much more attention because they usually come from large families."

> "A lot of times the disadvantaged must be taught that learning is a joy; if they can just learn that there is a lot of beauty in the world, that there are a lot of things to do, and that learning is fun, they will have learned the essential things for a child of this age."

> "Lunch was of great benefit to the youngsters; for some of them, the lunch time meal was the only real food the children got during the day."

> "One negative aspect about the classroom would be the many visitors and observers that tend to interrupt normal activities. I really feel that people who plan to visit the class should come early enough so that we could make introductions and arrangements without taking up class time. . . . I do think that when a guest comes in to get a view of our class, he should sit down and not expect to be entertained or talked to."

> "The aspect of Follow Through which I like most is that it gives us an opportunity to work a little more closely with these children on an individual basis. We have more discipline problems, more emotional problems with our Follow Through children than we do with our regular children."

> "A bad thing about busing is the fact that . . . the parent and teacher are so far apart that their chances of really getting together and working together are so much more remote. As for integration, the children in my room just get along beautifully, and it is never talked about---it is just taken for granted."

Classroom Interaction

When asked about classroom interaction, a majority of the Follow Through teachers perceived that generally speaking, white and non-white pupils interacted voluntarily and in a positive way. One teacher indicated that such interaction occurred sometimes, and two teachers indicated they didn't know. A question is implied by the last part of the last statement. Should teachers be sensitive to classroom interaction?

> "There is positive interaction when such occurs, but close relationships are still predominantly race-bound. This is because neighborhood children have already formed pal and buddy groups because they get to play together after school hours."

> "The children interact much better now than at first, but neighborhood children still choose their own neighborhood friends more than Follow Through children, and vice versa."

> "To children, the color difference is the same as the difference between the sexes. They know there is a difference in skin color, but it doesn't matter. The children play together very well, and if their best friend for the day is a different color, they certainly don't notice or care about it."

In response to a question regarding interaction between Follow Through and non-Follow Through children, five teachers perceived, generally speaking, voluntary positive interaction. One teacher indicated "didn't know," and one teacher gave no response.

> "The children don't seem to know who is Follow Through and who isn't. The only thing that they do notice is that some get to stay for dinner and they all wish they were lucky enough to do that."

The research staff, in meetings with some of the Follow Through teachers, developed and fielded a standard sociometric instrument for the purpose of measuring classroom social structure and social cleavage. On gathering the data, a majority of teachers expressed feelings that 1) the data was invalid by virtue of the complexity of the instrument, and 2) the timing for fielding the instrument was off in terms of busy classroom activities (around the fifth of December), and therefore data were incomplete. Another less complex sociometric instrument will be developed for evaluation purposes next year, for if properly utilized, such an instrument will provide rich data regarding classroom friendship groups and social structure.

Parent Participation

In response to a question about parent participation in the classroom, one teacher indicated the participation was adequate; six teachers stated that participation was inadequate. Three teachers stated there was no parent participation in the classroom, and one teacher stated that all classroom volunteers were from the school neighborhood.

Major obstacles in obtaining greater parent involvement in the kindergarten Follow Through project were noted by teachers as follows.

> Public transportation and distance from the school are major factors.
>
> Many families have only one car and the husband takes it to work.
>
> Both parents are employed.
>
> Smaller children are at home and babysitters are not available.

Again, if Follow Through project planners are desirous of a strong parent involvement component, obstacles perceived by teachers may need serious consideration.

Teacher Goals in Making Home Visits

Teacher personal goals in making home visits (listed in priority order) were stated as follows.

A.
1. To get acquainted
2. To obtain insight into home life and how parents feel about child
3. To furnish answers to parents' questions
4. To help parents solve problems they want help with
5. To encourage participation and school visits
6. To satisfy the desire of pupil to have teacher visit

B.
1. To effect better understanding and cooperation between home and school
2. To learn about child's background
3. To learn of methods used by parents to maintain control of the child

C.
1. Child's adjustment to school situation
2. Academic progress
3. Material needs (clothing, etc.)

D.
1. To learn about the child and home
2. To build rapport between parent and myself
3. To seek solutions to any problems the child might have at home or school
4. To socialize

E.
1. Gain parents' confidence and friendship
2. To let them know I was interested in developing their child's character and abilities
3. To make them more interested in their child's education--giving parents ideas on how to help their child at home
4. To make them feel that _______ was their school

F.
1. To get acquainted
2. To see what environment each child comes from
3. To find out more about the child by keeping my eyes open

G.
1. To show them that they do not have to be like me to be liked
2. To show them that not all school visits by school personnel bring sad or failing news
3. To show them that laughter and cheerfulness are definite and motivating factors in their child's education
4. To let ideas, attitudes, etc. peep through that there are acceptable traits we hope that they might understand and adopt
5. To learn from them and about them

Educators have long known that to consider a child in the vacuum of the school without consideration of social factors, such as home environment and cultural characteristics, is to limit the extent to which education can have impact.

In the main, teachers evidenced concern as they established their goals that effort be made by them to obtain not only information about the home but, in addition, parents' views and goals for their child. It is essential that the school and the home (in the case of low-income children) move closer together in order that one may buttress the efforts of the other.

Instructional Materials, Equipment

The adequacy of instructional materials and equipment was perceived by Follow Through teachers as follows.

Adequacy	Number
Somewhat more than adequate	1
Adequate	2
Somewhat inadequate	4

> We were provided with materials and equipment which would not have been in our room had it not been for Follow Through.
>
> We could have used a lot more material in the afternoon the last few weeks.
>
> We were short of toys.
>
> The first six weeks we had no toys or play equipment at all.

Classroom Space

Classroom space was described as exceptionally good by one teacher, adequate by three teachers, and inadequate by three teachers.

> We need more storage space.
>
> The room was shared with another teacher and was therefore inadequate.
>
> There is enough space for a small class; however, because of the design of the room there is a lot of space that cannot be utilized adequately.
>
> There were too many pupils for the size room we had.

Teacher Comments About Teacher Aides

Follow Through teachers were asked to respond to questions concerning the teacher aide. The majority stated that they were not knowledgeable regarding teacher aide selection procedure and therefore could give no opinion about same. Three teachers perceived the training of teacher aides to be adequate, three teachers perceived the training to be inadequate, and one teacher had no opinion. Comments about teacher aide training suggest more detailed training for aides on how to cope with behavior problems.

Field Trips

Teachers were asked to identify the trips and tours on which they had taken Follow Through pupils. The most popular places visited were the following.

Neighborhood hikes (4)
Farm (4)
Circus (4)
Aircraft factory (3)
Garden center (3)
Supermarket (6)
Department store (3)

Job Training

Follow Through teachers suggested the following to improve pre-service training.

Present methods rather than philosophy of teaching.
Include some introduction to community programs and their functions (e.g. CAP, Welfare, etc.)
Present more detailed information about the program.
Offer more training.
Present typical problems that might arise and suggest solutions.

Suggestions for improving in-service training were to continue to stress the exchange of ideas, and to require teachers to bring to meetings suggestions, techniques, ideas, etc. One teacher suggested spending meeting time making aids for teaching.

Suggestions given by teachers for improving the Follow Through project were as follows.

> "Because transportation is such a problem, the Follow Through office and each school could provide a bus trip to enable parents to visit the classroom early in the school year. This would help in familiarizing the parents with the school situation and encourage them to volunteer more freely as classroom aides."
>
> "Children with extreme emotional or medical problems should not be included in the program because the program is not equipped to handle them and they impede progress of the program as a whole."
>
> "Have fewer Follow Through than neighborhood children in the classroom."
>
> "Have smaller class size."
>
> "Allow both neighborhood and Follow Through children to attend in the afternoon."

The following information represents the results of a questionnaire submitted to teacher aides in May, 1969.

Background Information

Teacher Aide Distribution of Formal Education Attainment

Highest Grade Completed	Number
10	1
11	1
12	2
some college	3

Years Employed in Full Year Head Start or Follow Through

Years	Number
4	1
3	1
2	1
1	4

Pre-Service Training - Teacher Aides

Hours	Number
15*	5
none	2

Two teacher aides previous to employment with Follow Through classified themselves as housewives. The remainder classified themselves as Head Start aides.

Improvement of Children

There was general consensus by teacher aides that the children in the Follow Through project had shown either some or great improvement in all areas of the pupil program objectives.

Job Satisfaction

Teacher aides were asked to show how often during a normal week they did certain activities and how useful they believed the activities were. The ensuing list identifies teacher aide activities.

1. Help with supplies, materials, and equipment
2. Help children with clothing and personal needs
3. Prepare the room for activities
4. Assist with lunches and snacks
5. Help with cleanup
6. Take children to other rooms
7. Help with outdoor play
8. Accompany children on trips
9. Read or tell a story
10. Talk and listen to children
11. Mount pictures and assist with bulletin board

*Total number of hours offered

12. Use special language kits
13. Assist with pupil instruction
14. Other

All teacher aides did the following activities often and felt they were useful.

1. Help with supplies, materials, and equipment
4. Assist with lunches and snacks
5. Help with cleanup
7. Help with outdoor play
8. Accompany children on trips
10. Talk and listen to children
11. Mount pictures and assist with bulletin boards

All teacher aides believed that the activities they did, whether seldom or often, were useful. This fact would seem to indicate high job satisfaction. Fifty percent of the teacher aides indicated they felt that they could attend to more duties than they were presently assigned.

Personal Goals

Five teacher aides indicated as long range goals for a work career the desire to finish college and become a teacher. One teacher aide was undecided, and one did not respond to the question.

Suggestions for Improvement

Smoothing out busing problems, more pre-service training, eliminating children from the Follow Through project who had serious medical or emotional problems, more materials, and required courses in psychology and kindergarten methods were suggestions made for improving the Follow Through project.

In summary, over 70 percent of teacher aides were high school graduates or had some college. The majority of them were new to Follow Through or Head Start this year. Seventy percent of teacher aides participated in the total amount of pre-service training offered. They perceived that the tasks to which they were assigned were meaningful and that the Follow Through pupils had shown improvement in all areas of the program objectives. Teacher aides indicated they believed the program was very helpful to children, in that the smaller group in the afternoon allowed for greater teacher impact, as needed. The opinion was expressed that the Follow Through project was "wonderful" and "wish it could be extended to the higher grades."

Kindergarten Check List

Description

The Wichita Guidance Center (WGC) Kindergarten Check List was developed and standardized by Dr. Joseph Brewer, Director of the WGC, and provides a measure of school adjustment and readiness for academic work. The test consists of 22 items, which are ranked by the classroom teacher on a four-point scale (see Appendix). Items especially concern the ability to take care of personal needs, ability to work independently, to assume responsibility, listening habits, verbal communication frequency, etc. Scores may range from 0 to 66. The former is an indication of good adjustment; the latter is an indication of poor adjustment. That is to say, the lower the score, the more ready for academic work is the kindergarten pupil. A score of 27 and above is indication of severe maladjustment warranting further exploration.

Standardization

In 1964, 109 Wichita public school kindergarten teachers rated a random sample of five children in each of their kindergarten classes. A total of 917 children were rated. The mean score of Wichita schools was 11.9; the standard deviation was 11.4.

Results

The range of scores for each group in this study is as follows:

Group	Pre	Post
Experimental (HSFT)	1-53	0-44
HSNFT	0-59	1-52
FT Classmates	0-54	0-42
NHSNFT (LI)	0-62	1-56
NHSNFT (NLI)	0-45	0-35

Table 11 summarizes the data from the WGC Kindergarten Check List, pre and posttest, by group.

TABLE 11

WICHITA GUIDANCE CENTER KINDERGARTEN CHECK LIST

MEANS AND STANDARD DEVIATIONS OF SCORES BY GROUP, PRE AND POSTTEST

	Pretest			Posttest			
Group	N	$\bar{X}$	SD	N	$\bar{X}$	SD	$\bar{X}$ Gains
Experimental (HSFT)	42	20.2	14.3	39	14.3	12.2	5.9
HSNFT	41	15.2	11.7	43	13.7	11.6	1.5
FT Classmates	40	15.4	12.7	34	10.1	10.4	5.3
NHSNFT (LI)	41	20.1	13.2	47	20.7	14.8	- .6
NHSNFT (NLI)	33	12.7	12.7	36	9.4	10.1	3.3

Note: The higher the mean score the greater the lack of adjustment and readiness for academic work.

Table 12 shows the changes in percentage of tests scoring 27 and above, by group. A score of 27 or greater is indicative of severe maladjustment.

TABLE 12

WICHITA GUIDANCE CENTER KINDERGARTEN CHECK LIST
PERCENTAGE OF TESTS SCORING 27 OR ABOVE, BY GROUP

Group	Pretest	Posttest	Losses in Percentage of Severe Problems
Experimental (HSFT)	28.6	15.4	13.2
HSNFT	14.6	16.3	- 1.7
FT Classmates	20.0	8.8	11.2
NHSNFT (LI)	29.3	36.2	- 6.9
NHSNFT (NLI)	18.2	11.1	7.1

Follow Through pupils obtained the highest mean score of any of the five groups on the pretest (indicating poor adjustment), though NHSNFT (LI) children scored very nearly as high. Follow Through teachers, however, perceived a great amount of change in the adjustment of Follow Through pupils, who demonstrated a 5.9 gain from pretest to posttest; HSNFT demonstrated a 1.5 gain. At the same time, low-income pupils who had not participated in Full Year Head Start or Follow Through (NHSNFT - LI) were perceived by their teachers as having become even less well-adjusted than at the time of pretesting; thus, the gain score was - .6.

Moreover, with posttesting, Follow Through pupils demonstrated a 13.2 percent loss of severe problems, HSNFT showed a 1.7 percent increase in problems, while the NHSNFT (LI) pupils showed an increase in problems of 6.9 percent. At posttesting, Follow Through pupils scored 2.4 above the standardized mean for the Wichita Public Schools (11.9). The HSNFT group scored 1.8 above the standardized mean; Follow Through Classmates scored 1.8 points below the mean for the city. Low-income children, who hadn't participated in full year compensatory projects (NHSNFT - LI), scored 8.8 above the standardized mean on the posttest; non low-income children scored 2.5 below the standardized mean.

The following items on the Kindergarten Check List (pretest) were perceived by Follow Through teachers as being major causal factors of lack of adjustment in low-income pupils (ranked with highest percentage of pupil problems).

1. Has limited background of information and experience
2. Has immature, unclear, inadequate speech
3. Has poor listening habits
4. Cannot follow directions
5. Is unable to sit still
6. Has short attention span
7. Lacks self-confidence
8. Does not assume responsibilities

At the time of the posttest, the major causal factors in the poor adjustment of the Follow Through pupils, as perceived by their teachers, were as follows.

1. Has limited background of information and experience
2. Doesn't complete work he starts
3. Lacks self-confidence
4. Is unable to work independently
5. Cannot follow directions
6. Has a short attention span

Summary

The experimental group (Follow Through) and the four comparison groups were scored by their classroom teachers, utilizing the WGC Kindergarten Check List. Pretests were scored in October; posttests were scored in May. At the time the pretest was given, low-income Follow Through pupils evidenced the highest mean scores of the five groups, indicating poor adjustment to school and lack of readiness for academic work. Over 28 percent of this group evidenced severe maladjustment.

When the posttest was given, however, the Follow Through pupils showed nearly a six point gain in the mean score, and a decrease in the number of pupils with severe maladjustment by almost half.

The two other low-income groups, HSNFT and NHSNFT (LI), showed a posttest increase in the percentage of pupils evidencing severe maladjustment of 1.7 percent and 6.9 percent, respectively.

Both non low-income groups, Follow Through Classmates and NHSNFT (NLI), demonstrated a decrease in the percentage of pupils with severe maladjustment of 11.2 and 7.1, respectively. Both of these groups scored (on the posttest) below the city-wide mean of 11.9.

By the perceptions of their own classroom teachers, Follow Through pupils have improved greatly in their adjustment to the classroom and their readiness for academic work.

Psycholinguistic Abilities

The Illinois Test of Psycholinguistic Abilities (ITPA) is a diagnostic test, designed to detect specific abilities or disabilities in language development; it is useful as a diagnostic tool and also as an aid in the designing of remedial programs. Also, it is useful as a measure of language development.

A major hypothesis of this evaluation was that, in contrast to comparison subjects (HSNFT), the experimental subjects (HSFT) would evidence significantly superior progress in psycholinguistic functioning as measured by the ITPA. The subjects participated in the program for nine months; the interval between pre and posttesting was six months. Statistical analyses were performed on both language age and raw scores for the nine subtests, as well as the total score. The findings were essentially the same; the overall progress of both groups was similar, which affirmed the null hypothesis of no significant differences. The data relating to each subtest are presented within each of the following areas: decoding, encoding, association, automatic, and sequencing.

In an evaluation of group performance in terms of language age scores, it should be remembered that the mean chronological age of the experimental group is 68 months, and that of the comparison group is 67 months. The t-test (two-tailed for the pretest, one-tailed for the posttest) was used to determine significance; the acceptance level was preestablished as $p < .05$. Experimental group $N = 40$, Comparison group $N = 41$, unless otherwise stated.

Decoding

The ITPA has two decoding tests: an Auditory Decoding Test, and a Visual Decoding Test. Decoding is the ability to comprehend auditory and visual symbols; that is, the ability to comprehend spoken words, or pictures.

Auditory Decoding

This test assesses how well the child understands the spoken word. He is asked to respond with a yes or no answer to such questions as "Do cars cry?", "Do airplanes fly?"

Table 13 summarizes the data showing gains made by the experimental group and the comparison group. Pre and posttests showed a coefficient of correlation significant at the .01 level for both groups. That is to say, those pupils who did well on the pretest tended to do well on the posttest. Both the experimental and the comparison groups showed statistically significant gains (at the .01 level) between pre and posttests.

Table 14 compares the mean language age scores made by the experimental group and the comparison group. The differences between the experimental group and the comparison group on the pretest reached statistical significance at the .20 level---insufficient to the predetermined level of $p < .05$. At posttest, this trend to significance disappears; there were no statistically significant differences in gain scores. However, it should be noted that the experimental group gained nine months during the six month interval between pre and

TABLE 13
ITPA
AUDITORY DECODING

MEANS, STANDARD DEVIATIONS, CORRELATION COEFFICIENTS, AND SIGNIFICANCE LEVELS CONTRASTING RAW SCORES OF THE EXPERIMENTAL AND COMPARISON GROUPS

	Experimental Group			Comparison Group		
	Pre Test	Post Test	Gain	Pre Test	Post Test	Gain
$\bar{X}$	17.25	20.18	2.93	17.41	19.63	2.22
SD	4.77	4.44	5.06	4.94	5.38	5.50
Dif. between $\bar{X}$s	2.93			2.22		
r	.40			.44		
Signif. Level	.01			.01		
t	3.61			2.55		
Signif. Level	.01			.01		

TABLE 14
ITPA
AUDITORY DECODING

MEANS, STANDARD DEVIATIONS, AND SIGNIFICANCE LEVELS CONTRASTING LANGUAGE AGE SCORES OF THE EXPERIMENTAL AND COMPARISON GROUPS

	Pretest Scores		Posttest Scores		Gain Scores	
	Exper. Group	Comp. Group	Exper. Group	Comp. Group	Exper. Group	Comp. Group
$\bar{X}$	61.45	62.59	70.55	69.27	9.10	6.69
SD	13.88	15.66	14.83	18.36	16.07	19.19
Dif. between $\bar{X}$s	-1.14		1.28		2.42	
t	1.34		.34		.61	
Signif. Level	(.20) n.s.		n.s.		n.s.	

posttests, as contrasted to a seven month gain by the comparison group. Both groups evidenced scores four months below their chronological age on the posttest

Table 1-A (in the Appendix) compares the raw scores of the gains made by the experimental group and the comparison group. The findings are comparable to language age findings on the subtest.

Apparently, the Follow Through enhances listening skills, as evidenced by a nine month gain over a six month period. The gain for both groups was significant; the differences in gains were not significant. At the end of the school year, both groups were still performing below grade level.

Visual Decoding

This test measures the ability to do conceptual matching, or to interpret meaningful pictures excluding, the printed word. Children with severe disabilities in reading tend to do well on this subtest. The intent of the test is to have the subject locate among several alternative (comparison) pictures, the one which is perceptually identical to the one (stimulus) previously viewed.

Table 15 indicates that significant gains were made by both the experimental and comparison groups. However, the strength of the correlation between pre and posttests for both groups was not statistically significant and raises some questions as to why this is so. Does the test measure what it purports to measure? What are the reasons that children who scored the highest on the pretest did not tend to score the highest on the posttest?

TABLE 15

ITPA

VISUAL DECODING

MEANS, STANDARD DEVIATIONS, CORRELATION COEFFICIENTS, AND SIGNIFICANCE LEVELS CONTRASTING RAW SCORES OF THE EXPERIMENTAL AND COMPARISON GROUPS

	Experimental Group			Comparison Group		
	Pre Test	Post Test	Gain	Pre Test	Post Test	Gain
$\bar{X}$	11.13	13.28	2.15	10.71	12.46	1.76
SD	3.94	2.96	4.57	3.57	3.55	4.37
Dif. between $\bar{X}$s	2.15			1.76		
r	.24			.25		
Signif. Level	n.s.			n.s.		
t	3.10			2.54		
Signif. Level	.01			.01		

TABLE 16

ITPA

VISUAL DECODING

MEANS, STANDARD DEVIATIONS, AND SIGNIFICANCE LEVELS CONTRASTING LANGUAGE AGE SCORES OF THE EXPERIMENTAL AND COMPARISON GROUPS

	Pretest Scores		Posttest Scores		Gain Scores	
	Exper. Group	Comp. Group	Exper. Group	Comp. Group	Exper. Group	Comp. Group
$\bar{X}$	67.48	65.59	79.00	75.51	11.53	9.93
SD	19.11	17.19	16.62	19.84	22.95	22.15
Dif. between $\bar{X}$s	1.89		3.49		1.60	
t	.46		.85		.32	
Signif. Level	n.s.		n.s.		n.s.	

Table 16 indicates that in comparing the gains on this subtest there were no statistically significant differences, although both groups scored below the mean chronological age on the pretest and both were achieving above their chronological age at the time of the posttest. The experimental group showed gains of very nearly one year during the six month interval between pre and posttesting, the comparison group, ten months. Both groups, it would seem, enhanced their abilities to interpret visual stimuli (the gains were significant for each group); however, the difference in gains between the two groups was not significant. Analysis of raw scores indicated comparable findings (see Appendix) Table 2-A.

In summary, the results in the area of decoding show that Follow Through pupils exhibited a trend toward gaining more than the comparison group in their ability to understand and make use of auditory and visual inputs. On the posttest, however, there were no statistically significant differences in the gains of the Follow Through pupils when compared with those who had Head Start but not Follow Through.

Association

Association is the ability to relate visual or auditory symbols (which stand for ideas) in a meaningful way. The two association subtests of the ITPA are the Auditory-Vocal Association Test and the Visual-Motor Association Test.

Auditory-Vocal Association

This test is an analogies test much like those found on the Binet and WISC. Clinical experience suggests that this subtest is highly correlated with mental age. A sentence technique is employed and the child is required to supply the analogous term, for instance, "I sit on a chair, I sleep on a _____."

Table 17 summarizes the data showing gains made by the experimental group and the comparison group. The correlation between pre and posttest by each group was significant at the .01 level; gains made by each group were statistically significant at the .01 level.

Table 18 compares the language age scores made by the experimental group and the comparison group. There was no statistically significant difference between the experimental and comparison groups on the pretest, or in gains made. It should be noted that both groups scored below their chronological age (six months, experimental group, five months, comparison group) on the pretest; each group scored five months below their mean chronological age at posttest, though gains of nearly seven months were made by each group.

Analysis of raw scores indicated comparable findings to language age scores (see Appendix) Table 3-A.

The importance of this subtest is substantial because of the high correlation with mental age. The fact that the mental ages of the experimental and comparison groups are not statistically different at the time of pretest is meaningful in terms of scores on other achievement tests that were given during the past school year.

Gains by each group were significant, but in comparing gains there

TABLE 17

ITPA

AUDITORY-VOCAL ASSOCIATION

MEANS, STANDARD DEVIATIONS, CORRELATION COEFFICIENTS, AND SIGNIFICANCE LEVELS CONTRASTING RAW SCORES OF THE EXPERIMENTAL AND COMPARISON GROUPS

	Experimental Group			Comparison Group		
	Pre Test	Post Test	Gain	Pre Test	Post Test	Gain
$\bar{X}$	13.37	15.45	2.08	13.32	15.17	1.85
SD	4.43	3.96	3.22	3.62	3.53	3.21
Dif. between $\bar{X}$s	2.08			1.85		
r	.71			.56		
Signif. Level	.01			.01		
t	4.02			3.65		
Signif. Level	.01			.01		

TABLE 18

ITPA

AUDITORY-VOCAL ASSOCIATION

MEANS, STANDARD DEVIATIONS, AND SIGNIFICANCE LEVELS CONTRASTING LANGUAGE AGE SCORES OF THE EXPERIMENTAL AND COMPARISON GROUPS

	Pretest Scores		Posttest Scores		Gain Scores	
	Exper. Group	Comp. Group	Exper. Group	Comp. Group	Exper. Group	Comp. Group
$\bar{X}$	62.38	61.17	69.13	67.78	6.75	6.61
SD	15.82	13.02	14.55	12.40	12.66	11.51
Dif. between $\bar{X}$s	1.20		1.34		.14	
t	.37		.44		.05	
Signif. Level	n.s.		n.s.		n.s.	

were no statistically significant differences. Both groups performed below their mean chronological age.

Visual-Motor Association

The test is a measure of the ability to make relationships among the meaningful visual symbols which are presented. For instance, the examiner places a toy shoe, hammer and sock in a row before the child, naming them as he does so. The examiner picks up the shoe and says, "Which one of these things (hammer or sock) goes with this (shoe)?"

Table 19 summarizes the data showing gains made by the experimental group and the comparison group. The correlation between pre and posttest of the experimental group was significant at the .05 level; however, the correlation between the pre and posttest of the comparison group was not significant and raises question as to why, in the main, the pupils (comparison group) who scored high on the pretest did not score high on the posttest. Both groups showed statistically significant gains between pretest and posttest.

Table 20 compares the language age scores made by the experimental group and the comparison group. There are no statistically significant differences between the experimental and comparison groups on the pretest, posttest, and gain scores.

Both groups demonstrated over a nine month gain in the six month interval. However, it should be noted that the experimental group scored ten months below the mean chronological age on the pretest and the comparison group scored seven months below the mean chronological

TABLE 19

ITPA

VISUAL-MOTOR ASSOCIATION

MEANS, STANDARD DEVIATIONS, CORRELATION COEFFICIENTS, AND SIGNIFICANCE LEVELS CONTRASTING RAW SCORES OF THE EXPERIMENTAL AND COMPARISON GROUPS

	Experimental Group			Comparison Group		
	Pre Test	Post Test	Gain	Pre Test	Post Test	Gain
$\bar{X}$	11.53	13.78	2.25	11.71	13.93	2.22
SD	4.51	3.82	4.79	4.06	3.45	4.66
Dif. between $\bar{X}$s	2.25			2.22		
r	.35			.24		
Signif. Level	.05			n.s.		
t	2.93			3.01		
Signif. Level	.01			.01		

TABLE 20

ITPA

VISUAL-MOTOR ASSOCIATION

MEANS, STANDARD DEVIATIONS, AND SIGNIFICANCE LEVELS CONTRASTING LANGUAGE AGE SCORES OF THE EXPERIMENTAL AND COMPARISON GROUPS

	Pretest Scores		Posttest Scores		Gain Scores	
	Exper. Group	Comp. Group	Exper. Group	Comp. Group	Exper. Group	Comp. Group
$\bar{X}$	58.25	59.51	68.23	68.78	9.98	9.27
SD	18.52	17.03	15.77	14.58	20.33	19.58
Dif. between $\bar{X}$s	-1.26		-.56		.71	
t	.32		.16		.16	
Signif. Level	n.s.		n.s.		n.s.	

age. At posttest, the experimental group was six months below the mean chronological age and the comparison group was four months below the mean chronological age. Analysis of raw scores indicated comparable findings (see Appendix) Table 4-A.

In summary, both groups evidenced gains in the area of association, though there was no statistically significant difference between groups. In addition, gains for both the experimental and comparison groups were not sufficient to bring the scores up to the mean chronological age.

Encoding

Encoding is the ability to express one's ideas in words or gestures. The ITPA measures two kinds of encoding. The Vocal Encoding Test assesses the child's ability to express his ideas in spoken language. His ability to express ideas in gestures is measured by the Motor Encoding Test.

Vocal Encoding

The test assesses the child's ability to verbally present meaningful ideas in response to a simple visual test; that is, discussing an object in terms of name, color, shape, uses, composition, etc.

Table 21 summarizes the data showing gains made by the experimental group and the comparison group. The correlation between pre and posttest of both groups was significant at the .01 level; gains were statistically significant (.05) for both groups.

Table 22 compares the language age scores made by the experimental group and the comparison group. The differences between the experimental group and the comparison group on the pretest reached significance at the .10 level, insufficient to the predetermined level of $p < .05$. At posttest, the difference between mean scores was maintained (.10) and

TABLE 21

ITPA

VOCAL ENCODING

MEANS, STANDARD DEVIATIONS, CORRELATION COEFFICIENTS, AND SIGNIFICANCE LEVELS CONTRASTING RAW SCORES OF THE EXPERIMENTAL AND COMPARISON GROUPS

	Experimental Group			Comparison Group		
	Pre Test	Post Test	Gain	Pre Test	Post Test	Gain
$\bar{X}$	13.26	15.26	2.00	15.32	16.76	1.44
SD	5.57	5.60	6.05	5.03	5.32	4.62
Dif. between $\bar{X}$s	2.00			1.44		
r	.41			.50		
Signif. Level	.01			.01		
t	2.03			1.76		
Signif. Level	.05			.05		

TABLE 22

ITPA

VOCAL ENCODING

MEANS, STANDARD DEVIATIONS, AND SIGNIFICANCE LEVELS CONTRASTING LANGUAGE AGE SCORES OF THE EXPERIMENTAL AND COMPARISON GROUPS

	Pretest Scores		Posttest Scores		Gain Scores	
	Exper. Group	Comp. Group	Exper. Group	Comp. Group	Exper. Group	Comp. Group
$\bar{X}$	65.21	74.54	74.08	80.78	8.87	6.24
SD	22.28	21.42	22.50	22.24	24.57	22.61
Dif. between $\bar{X}$s	-9.33		-6.70		2.63	
t	1.89		1.32		.49	
Signif. Level	(.10) n.s.		(.10) n.s.		n.s.	

was therefore still not significant at the acceptable level of .05. There was no statistically significant difference in gain scores.

The experimental group at pretest scored three months below the mean chronological age; at posttest the group scored at the same level as the mean chronological age. The comparison group at pretest scored eight months above the mean chronological age for the group; at posttest they scored seven months above the mean chronological age for the group. This is to say, by posttest, the experimental group had gained nearly nine months in the six month interval, whereas the comparison group exhibited only a six month gain. The difference, however, was not statistically significant.

The literature describing the culturally disadvantaged child emphasizes the problem of language deficiency. The data tend to show that though the Follow Through pupils started the year at a comparative disadvantage in being able to verbalize their thoughts, by May 1, the language age score for the group showed them performing at a level equal with their chronological age.

Analysis of raw scores showed comparable results (see Appendix) Table 5-A.

Motor Encoding

The test was intended to measure the subject's ability to express an idea by gestures. The emphasis is on the expression of a meaningful idea in a way which is understood by the recipient of such communication. The manual language of the deaf is an example of motor encoding. This ability is tested by showing the child an object and asking him to show a motion appropriate for manipulating it (e.g. drinking from a cup, strumming a guitar).

Table 23 summarizes the data showing gains made by the experimental group and the comparison group. The correlation between pre and posttests for both groups was significant at the .01 level. The mean gain scores for the experimental group reached significance at the .10 level, insufficient for the predetermined .05 level. The comparison group mean gain scores were significant at the .01 level.

Table 24 compares language age scores made by the experimental group and the comparison group. The difference between the mean scores at the pretest reached a significance level of .20, insufficient for the predetermined .05 level. Posttest results in comparing the mean language age scores of the two groups show no statistically significant differences. Mean gain scores show no statistically significant differences between the two groups.

The experimental group showed a mean gain of 4.5 months, during the six month testing interval. The comparison group showed a mean gain of 6.7 months during the same interval. At posttest, both groups were achieving well below the mean chronological age.

Analysis of raw scores provided comparable results (see Appendix) Table 6-A.

In the overview, the data seem to indicate that the children of both groups increased their vocal encoding skills significantly, though the difference in mean gains scores was not statistically significant. The experimental group did not demonstrate statistically significant gains in the area of motor encoding; the comparison group did.

TABLE 23

ITPA

MOTOR ENCODING

MEANS, STANDARD DEVIATIONS, CORRELATION COEFFICIENTS, AND SIGNIFICANCE LEVELS CONTRASTING RAW SCORES OF THE EXPERIMENTAL AND COMPARISON GROUPS

	Experimental Group			Comparison Group		
	Pre Test	Post Test	Gain	Pre Test	Post Test	Gain
$\bar{X}$	11.83	12.68	.85	10.85	12.17	1.32
SD	3.64	3.86	3.51	3.39	3.39	3.23
Dif. between $\bar{X}$s	.85			1.32		
r	.56			.55		
Signif. Level	.01			.01		
t	1.51			2.58		
Signif. Level	(.10) n.s.			.01		

TABLE 24

ITPA

MOTOR ENCODING

MEANS, STANDARD DEVIATIONS, AND SIGNIFICANCE LEVELS CONTRASTING LANGUAGE AGE SCORES OF THE EXPERIMENTAL AND COMPARISON GROUPS

	Pretest Scores		Posttest Scores		Gain Scores	
	Exper. Group	Comp. Group	Exper. Group	Comp. Group	Exper. Group	Comp. Group
$\bar{X}$	60.83	55.66	65.33	62.44	4.50	6.78
SD	18.44	16.69	20.39	17.26	17.96	15.54
Dif. between $\bar{X}$s	5.17		2.89		-2.28	
t	1.31		.68		.60	
Signif. Level	(.20) n.s.		n.s.		n.s.	

Automatic

Children become familiar with linguistic structure based on what they have already heard; they acquire the ability to use language in the grammatical aspects long before they understand the rules of grammar which they are following. This type of learning is called automatic because the habit chains acquired in relation to grammar permits the individual to attend to the content of a message which the words used express.

Auditory-Vocal Automatic

The Auditory-Vocal Automatic subtest is concerned with the syntactual and grammatical aspects of language. The test measures the subject's ability to use grammatical structures which he has presumably heard in the language spoken in his environment. For example, the subject must supply the last word of the statement: "Father is opening the can; now the can has been ________."

Table 25 summarizes the data showing gains made by the experimental group and the comparison group. Pre and posttests show a coefficient of correlation significant at the .01 level for both groups. Gains made by the experimental group were not statistically significant; gains demonstrated by the comparison group were statistically significant at the .01 level.

Table 26 compares language age scores made by the experimental group and the comparison group. There was no statistically significant difference in pretest scores between the two groups; there was no

TABLE 25

ITPA

AUDITORY-VOCAL AUTOMATIC

MEANS, STANDARD DEVIATIONS, CORRELATION COEFFICIENTS, AND SIGNIFICANCE LEVELS CONTRASTING RAW SCORES OF THE EXPERIMENTAL AND COMPARISON GROUPS

	Experimental Group			Comparison Group		
	Pre Test	Post Test	Gain	Pre Test	Post Test	Gain
$\bar{X}$	9.00	9.28	.28	7.85	9.39	1.54
SD	4.50	4.63	3.88	3.89	4.49	3.71
Dif. between $\bar{X}$s	.28			1.54		
r	.64			.62		
Signif. Level	.01			.01		
t	.44			2.62		
Signif. Level	n.s.			.01		

TABLE 26

ITPA

AUDITORY-VOCAL AUTOMATIC

MEANS, STANDARD DEVIATIONS, AND SIGNIFICANCE LEVELS CONTRASTING LANGUAGE AGE SCORES OF THE EXPERIMENTAL AND COMPARISON GROUPS

	Pretest Scores		Posttest Scores		Gain Scores	
	Exper. Group	Comp. Group	Exper. Group	Comp. Group	Exper. Group	Comp. Group
$\bar{X}$	59.78	54.66	61.05	63.44	1.28	8.78
SD	20.28	17.47	20.55	21.16	17.35	20.99
Dif. between $\bar{X}$s	5.12		-2.39		-7.51	
t	1.20		.51		1.73	
Signif. Level	n.s.		n.s.		.05	

statistically significant difference in posttest scores. Mean gain scores, however, indicate a statistically significant difference at the .05 level in favor of the comparison group. The data indicate that the experimental group achieved a one month gain in the six month testing interval; the comparison group achieved a nine month gain during the same interval. The comparison group at pretest demonstrated a mean language age score 19 months below the mean chronological age of the group. At posttest the comparison group performed at a level ten months below the mean chronological age.

The experimental group, however, performed at a level nine months below the mean chronological age at pretest; at posttest the mean language age score was 13 months below the mean chronological age of the group. Both groups evidence severe retardation in the development of auditory-vocal automatic skills.

Analysis of raw scores provided comparable results (see Appendix) Table 7-A.

Sequencing

The sequencing section of the ITPA consists of two subtests; the Visual-Motor Sequencing Test and the Auditory-Vocal Sequencing Test Sequencing as used here is the ability to correctly reproduce a sequence of symbols; it is largely dependent upon visual and/or auditory memory.

Visual-Motor Sequencing

This is a subtest of immediate visual memory. Low scores tend to be related to poor reading. The subtest is representative of a child's approach to real tasks involving visual memory. It requires the subject to duplicate the order of a sequence of pictures or geometric designs presented to him and then removed.

Table 27 summarizes the data showing gains made by the experimental group and the comparison group. Pre and posttests show a coefficient of correlation significant at the .01 level for the experimental group and at the .05 level for the comparison group. Neither group demonstrated statistically significant gains though the experimental group showed significant gains at the .10 level (insufficient for the predetermined .05 level).

Table 28 compares the mean language age scores made by the experimental group and the comparison group; there were no statistically significant differences at pretest, posttest, or on gains. The experimental group achieved a three month gain during the testing interval of six months; the comparison group achieved less than one month during the same period. At posttest, both groups performed more than half a year below the mean chronological age of their group.

Analysis of raw scores indicated comparable findings (see Appendix) Table 8-A.

If, as ITPA developers suggest, poor performance on this subtest may portend reading difficulty, the results of scores by both groups augur adversity in this area.

Auditory-Vocal Sequencing

This subtest examines the subject's ability to correctly repeat a sequence of digits previously heard.

Table 29 shows mean pre and posttest raw scores and gains for both groups. The coefficient of correlation on pre and posttests for both the experimental group and the comparison group was significant

TABLE 27

ITPA

VISUAL-MOTOR SEQUENCING

MEANS, STANDARD DEVIATIONS, CORRELATION COEFFICIENTS, AND SIGNIFICANCE LEVELS CONTRASTING RAW SCORES OF THE EXPERIMENTAL AND COMPARISON GROUPS

	Experimental Group			Comparison Group		
	Pre Test	Post Test	Gain	Pre Test	Post Test	Gain
$\bar{X}$	11.67	12.50	.83	11.59	11.71	.12
SD	3.84	4.79	3.66	3.83	3.30	4.11
Diff. between $\bar{X}$s	.83			.12		
r	.66			.34		
Signif. Level	.01			.05		
t	1.41			.19		
Signif. Level	(.10) n.s.			n.s.		

TABLE 28

ITPA

VISUAL-MOTOR SEQUENCING

MEANS, STANDARD DEVIATIONS, AND SIGNIFICANCE LEVELS CONTRASTING LANGUAGE AGE SCORES OF THE EXPERIMENTAL AND COMPARISON GROUPS

	Pretest Scores		Posttest Scores		Gain Scores	
	Exper. Group	Comp. Group	Exper. Group	Comp. Group	Exper. Group	Comp. Group
$\bar{X}$	65.23	64.59	67.88	65.29	2.65	.71
SD	14.31	15.34	18.16	14.43	13.26	18.52
Diff. between $\bar{X}$s	.64		2.58		1.94	
t	.19		.70		.54	
Signif. Level	n.s.		n.s.		n.s.	

TABLE 29

ITPA

AUDITORY-VOCAL SEQUENCING

MEANS, STANDARD DEVIATIONS, CORRELATION COEFFICIENTS, AND SIGNIFICANCE LEVELS CONTRASTING RAW SCORES OF THE EXPERIMENTAL AND COMPARISON GROUPS

	Experimental Group			Comparison Group		
	Pre Test	Post Test	Gain	Pre Test	Post Test	Gain
$\bar{X}$	18.70	20.73	2.03	19.68	19.58	-.10
SD	5.81	6.82	4.54	7.54	6.24	3.19
Diff. between $\bar{X}$s	2.03			.10		
r	.75			.91		
Signif. Level	.01			.01		
t	2.78			.20		
Signif. Level	.01			n.s.		

TABLE 30

ITPA

AUDITORY-VOCAL SEQUENCING

MEANS, STANDARD DEVIATIONS, AND SIGNIFICANCE LEVELS CONTRASTING LANGUAGE AGE SCORES OF THE EXPERIMENTAL AND COMPARISON GROUPS

	Pretest Scores		Posttest Scores		Gain Scores	
	Exper. Group	Comp. Group	Exper. Group	Comp. Group	Exper. Group	Comp. Group
$\bar{X}$	65.80	69.24	72.03	68.12	6.23	-1.12
SD	18.30	23.81	23.35	23.43	17.47	12.34
Diff. between $\bar{X}$s	-3.44		3.90		7.35	
t	.72		.74		2.17	
Signif. Level	n.s.		n.s.		.025 (1-t.)	

at the .01 level. The experimental group demonstrated statistically significant gains during the six month testing interval; the comparison group did not.

Table 30 compares the mean language age scores made by the experimental group and the comparison group. There were no statistically significant differences on pretest scores or on posttest scores. Mean gain scores, however, indicate statistically significant differences at the .025 level. The experimental group gained six months during the testing interval; the comparison group demonstrated a negative gain of one month. On posttests, the experimental group functioned two months below the mean chronological age of the group; the comparison group scored five months below the mean chronological age for their group.

Analysis of raw scores indicated comparable findings (see Appendix) Table 9-A.

In summary, it appears that both the experimental and comparison groups evidence poor performance on the sequencing tests. Gains in the area of sequencing seem to be minimal.

Total ITPA Scores

The total ITPA score is a composite of the subject's performance on the nine subtests of the ITPA. The score represents an overall assessment of the level of psycholinguistic functioning. The total language age score has been corrected to eliminate the variability of chronological age.

Table 31 summarizes the data showing total gains made by the experimental and comparison groups. The coeffecient of correlation between the pre and posttest of both groups is statistically significant at the .01 level. Gains made by both groups are statistically significant at the .01 level.

Table 32 compares the total mean language age score made by the experimental and comparison groups. The pretest totals, posttest totals, and gain scores show no statistically significant differences. At pretest, the experimental group functioned six months below the mean chronological age for the group; at posttest, the experimental group was functioning five months below the mean chronological age.

The comparison group at pretest was functioning five months below the mean chronological age; at posttest the group scored six months below the mean chronological age.

On the mean total ITPA, the experimental group gained nearly seven months during the six month testing interval. The comparison group gained five months during the same period.

The experimental and comparison groups were compared using total raw scores for pretest, posttest, and gain. The findings were in keeping with the findings when language age total scores were used. See Appendix Table 10-A.

TABLE 31

TOTAL ITPA

MEANS, STANDARD DEVIATIONS, CORRELATION COEFFICIENTS, AND SIGNIFICANCE LEVELS CONTRASTING RAW SCORES OF THE EXPERIMENTAL AND COMPARISON GROUPS

	Experimental Group			Comparison Group		
	Pre Test	Post Test	Gain	Pre Test	Post Test	Gain
$\bar{X}$	117.15	133.43	16.28	118.54	130.39	11.85
SD	25.87	25.46	13.71	23.87	24.89	14.85
Diff. between $\bar{X}$s	16.28			11.85		
r	.86			.81		
Signif. Level	.01			.01		
t	7.32			5.11		
Signif. Level	.01			.01		

TABLE 32

TOTAL ITPA

MEANS, STANDARD DEVIATIONS, AND SIGNIFICANCE LEVELS CONTRASTING LANGUAGE AGE SCORES OF THE EXPERIMENTAL AND COMPARISON GROUPS

	Pretest Scores		Posttest Scores		Gain Scores	
	Exper. Group	Comp. Group	Exper. Group	Comp. Group	Exper. Group	Comp. Group
$\bar{X}$	62.18	62.27	68.87	67.41	6.69	5.15
SD	9.91	9.33	10.79	10.06	6.10	6.72
Diff. between $\bar{X}$s	.59		.73		1.55	
t	.04		.62		1.06	
Signif. Level	n.s.		n.s.		n.s.	

Figures 2, 3, and 4 show language age pre and posttest profiles of the experimental and comparison groups. It can be noted that the performance of both groups, in the main, was below that expected on the basis of chronological age.

Overview of the ITPA

The total number of months gained by the experimental group on the nine subtests of the ITPA was 62. The total number of months gained by the comparison group was 55. On four subtests dealing with comprehension, verbal ability, and mental ability, the experimental group gained a total of 37 months, as contrasted with the gain of 30 months achieved by the comparison group on those same subtests.

	Gains (in months)	
Subtest ITPA	Exp. Group	Comp. Group
Auditory Decoding	9	7
Visual Decoding	12	10
Auditory-Vocal Association	7	7
Vocal Encoding	9	6
	37	30

FIGURE 2

Language Age Profile on ITPA Pre and Posttest Performances of Experimental Group

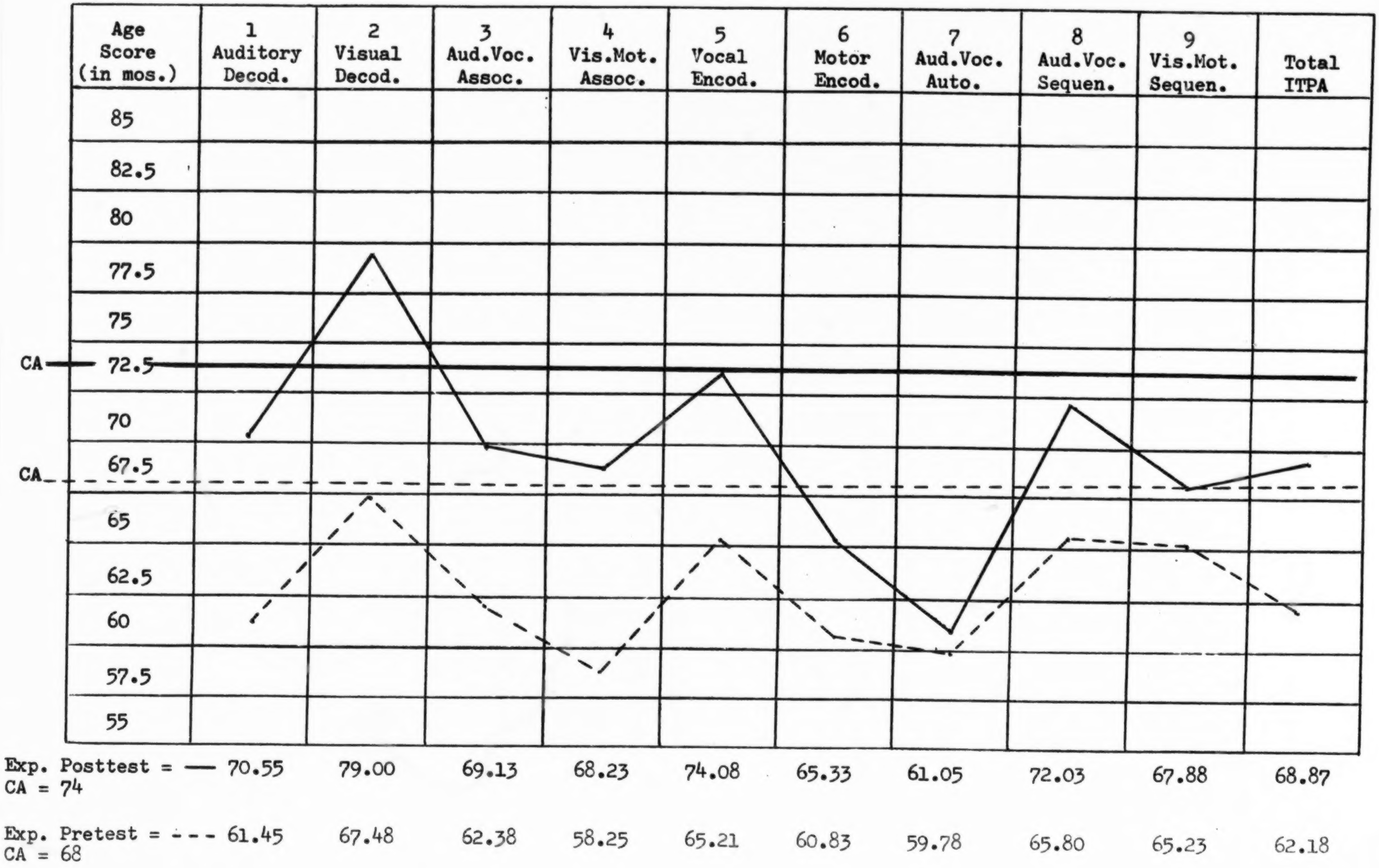


FIGURE 3

Language Age Profile on ITPA Pre and Posttest Performances of Comparison Group

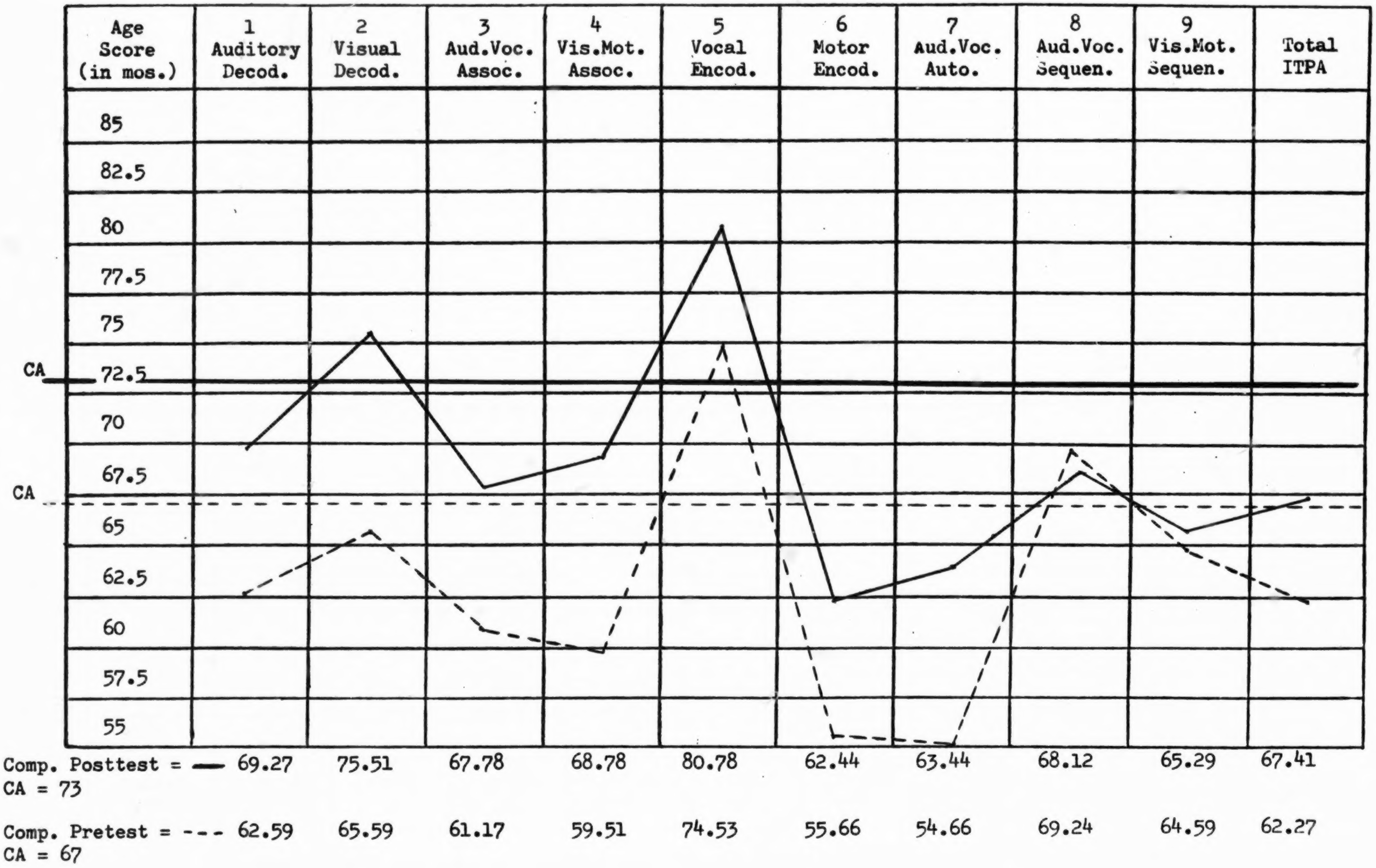
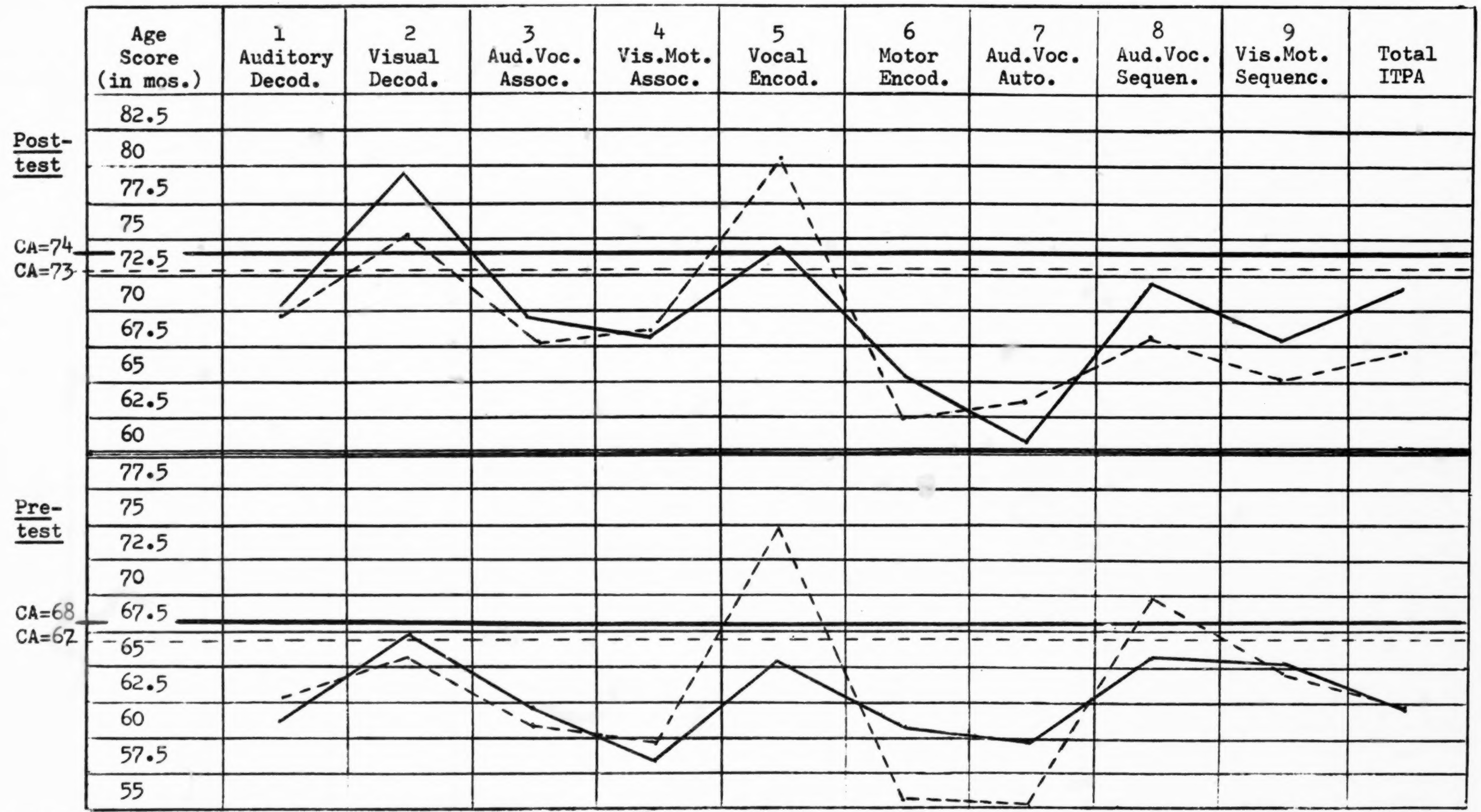


FIGURE 4

Language Age Profiles on ITPA Pre and Posttest Data for Experimental and Comparison Groups



		1	2	3	4	5	6	7	8	9	Total
Posttest	Exp. ——	70.55	79.00	69.13	68.23	74.08	65.33	61.05	72.03	67.88	68.87
	Com. - - -	69.27	75.51	67.78	68.78	80.78	62.44	63.44	68.12	65.29	67.41
Pretest	Exp. ——	61.45	67.48	62.38	58.25	65.21	60.83	59.78	65.80	65.23	62.18
	Com. - - -	62.59	65.59	61.17	59.51	74.53	55.66	54.66	69.24	64.59	62.27

These subtests are considered highly significant in predicting a child's success in formal education. Follow Through pupils on the series of nine subtests demonstrated greater mean gains than did the comparison group (See Figure 5). However, there was no statistically significant difference in gains when comparing the two groups.

The experimental group demonstrated statistically significant gains between pretest and posttest on six of the nine subtests of the ITPA. These subtests are: Auditory Decoding, Visual Decoding, Auditory-Vocal Association, Visual-Motor Association, Vocal Encoding, and Auditory-Vocal Sequencing.

No statistically significant gains between pre and posttest were evident on three of the nine subtests by the experimental group. They are: Motor Encoding, Auditory-Vocal Automatic, and Visual-Motor Sequencing. The mean of these language age scores is nine months below the mean chronological age at posttest.

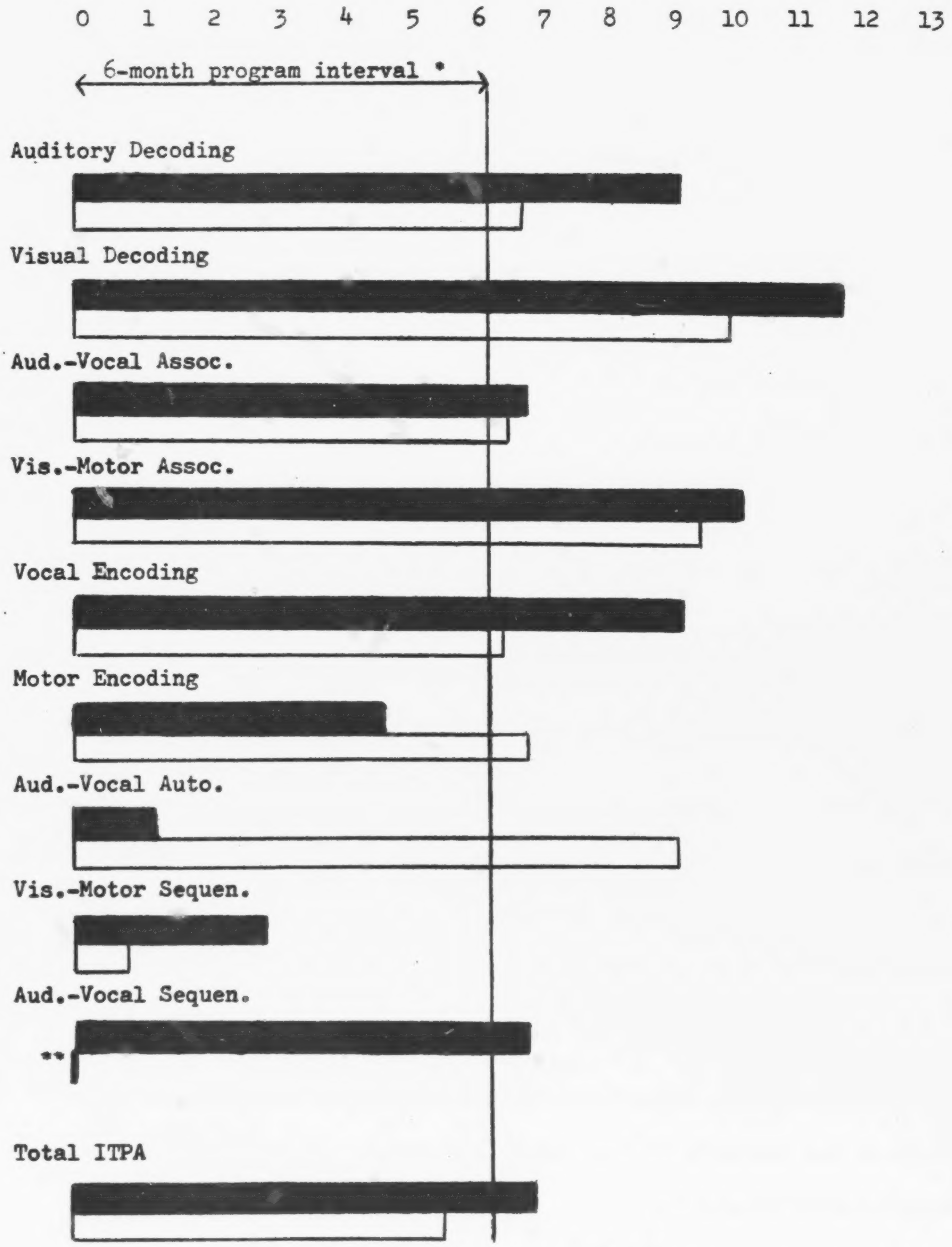
The comparison group demonstrated statistically significant gains between pre and posttest on seven of the nine subtests of the ITPA. These subtests are: Auditory Decoding, Visual Decoding, Auditory-Vocal Association, Visual-Motor Association, Vocal Encoding, Motor Encoding, and Auditory-Vocal Automatic.

No statistically significant gains between pre and posttest were evident on two subtests by the comparison group: Visual Decoding, and Auditory-Vocal Sequencing.

Both the experimental group and the comparison group functioned at or above the mean chronological age on Visual Decoding and Vocal

FIGURE 5

Mean Gains in Months on ITPA Subtests and Total



*Mean testing date were 11/1/68 and 5/1/69.

**Comparison group showed a loss of 1.12 months.

■ Experimental Group

□ Comparison Group

Encoding. On the remaining subtests and on total scores, both groups functioned below the mean chronological age, indicating severe deficiencies in both groups.

There were no statistically significant differences between the two groups on any of the subtests at pretest, indicating group comparability in regard to the ITPA measures. There were no statistically significant differences between the two groups on any of the posttests.

The experimental group showed statistically significant differences in gains on the Auditory-Vocal Sequencing subtest. The comparison group showed statistically significant differences in gains on the Auditory-Vocal Automatic subtest.

In conclusion, the null hypothesis of no statistically significant differences has been confirmed; the hypothesis that the experimental group would evidence significantly superior progress in psycholinguistic functioning is not affirmed. However, the short span of the testing interval may indeed have precluded significance. There may appear to be a trend in favor of the experimental group, in the light of the total months gained, and another year of exposure to Follow Through may provide significant differences.

Metropolitan Readiness Tests

The Metropolitan Readiness Tests (MRT) purport to measure the extent to which school beginners have developed skills and abilities that contribute to readiness for first grade instruction. Readiness as defined by the authors of these tests implies a sufficient degree of maturity, proficiency, or skill development that will enable young children to make satisfactory progress when they enter school.

Six tests are included in the Metropolitan Readiness Tests, and they are as follows:

Test I Word Meaning is a 16-item picture vocabulary test. The pupil selects from three pictures the one that illustrates the word the examiner names. The test provides a measure of the child's verbal concept ability.

Test II Listening is a 16-item test of ability to comprehend phrases and sentences instead of individual words. The pupil selects from three pictures the one which portrays a situation or event the examiner describes briefly. The pupil must attend carefully and hold one or more ideas in mind for short periods of time.

Test III Matching is a 14-item test of visual perception involving the recognition of similarities. The pupil marks one of three pictures which matches a given picture. The test seems to correlate well with beginning reading skills.

Test IV Alphabet is a 16-item test of ability to recognize lower case letters of the alphabet. The pupil chooses the letter named from among four alternatives. Low score in this area is indicative of little exposure and/or encouragement to attend to the formal characteristics of words.

Test V Numbers is a 26-item test of number knowledge and number concepts. It serves as a predictor of success in first grade math and is also indicative of general mental alertness.

Test VI Copying is a 14-item test which measures a combination of visual perception and motor control similar to what is called for in hand writing.

In addition to the six tests, the Draw-A-Man test was administered. The detail and skill with which a child draws a picture of a man is an indication of general intellectual maturity.

The MRT was administered in May, 1969, by school counselors to the experimental group (HSFT), Follow Through Classmates, and to members of the three other comparison groups HSNFT, NHSNFT (LI), NHSNFT (NLI) . There was necessarily disparity in testing group size, due to the fact that the experimental group and classmates were located in four schools which allowed for larger size groups tested; the members of the comparison groups were located in many schools and were therefore tested in smaller groups. In order to minimize variability in test administration which might result from different sizes of groups, counselors were urged to exercise maximum precaution in insuring accurate administration of the MRT by following precisely the instructions for administration of the test. Further, on observing a child who could not adjust to a group testing situation, counselors agreed to retest. No child was tested in a group of more than 15 pupils.

Sample data on the experimental group and Follow Through Classmate group have been checked against the total population data for each group and found to be equivalent. Therefore, sample data will be reported. The underlying hypothesis was that the experimental group (HSFT) would obtain higher mean scores on tests of school readiness than the major comparison group (HSNFT). Significance level was established at $p < .05$. A one-tailed test was used. Experimental group scores were also contrasted with the three other comparison groups.

Though total score provides the more dependable indication of readiness for first grade, the analysis of subtests were reported in order to provide some indication of how the various comparison groups scored in each segment of the MRT.

Comparison of Mean Scores and Standard Deviations by Subtest and Total

Table 33 contains mean scores and standard deviations by subtest and total score of the experimental group (HSFT) and the major comparison group (HSNFT).

TABLE 33

COMPARISON OF MEAN SCORES AND STANDARD DEVIATIONS OF MRT SUBTESTS AND TOTAL FOR EXPERIMENTAL AND HSNFT GROUPS

Experimental N = 39 Comparison N = 34

Subtest	Group	$\bar{X}$	SD	t-value	Significance Level
1	Exp. Comp.	6.128 6.619	1.9634 2.0925	1.7041	n.s.
2	Exp. Comp.	9.718 9.119	2.0248 1.8152	1.3872	(.10) n.s.
3	Exp. Comp.	6.077 6.524	2.9210 2.4126	0.7441	n.s.
4	Exp. Comp.	7.385 8.357	4.3003 3.8963	1.0545	n.s.
5	Exp. Comp.	10.231 10.952	4.1600 3.3732	0.8493	n.s.
6	Exp. Comp.	4.410 3.905	3.3182 2.4280	0.7762	n.s.
Total	Exp. Comp.	43.923 45.476	14.4086 10.6373	0.5478	n.s.

The comparison group scored higher than the experimental group on four of six subtests and on the total score. However, using a one-tailed test ($p < .05$), the data show in comparing subtests and total MRT mean scores that there were no statistically significant differences, and the null hypothesis was affirmed. The only discernible trend to significant difference in favor of the experimental group occurred on subtest 2. Additional pupil exposure to school programs will possibly provide greater clarification of differences.

Table 34 contains mean scores and standard deviations by subtest and total score of the experimental group and their classmates.

TABLE 34

COMPARISON OF MEAN SCORES AND STANDARD DEVIATIONS OF MRT SUBTESTS AND TOTAL FOR EXPERIMENTAL GROUP AND FOLLOW THROUGH CLASSMATES

Experimental N = 39 Comparison N = 34

Subtest	Group	$\bar{X}$	SD	t-value	Significance Level
1	Exp. Comp.	6.128 7.824	1.9634 2.7382	3.0274	.01
2	Exp. Comp.	9.718 10.176	2.0248 2.5948	1.8185	(.10) n.s.
3	Exp. Comp.	6.077 7.088	2.9210 3.1376	1.4061	(.20) n.s.
4	Exp. Comp.	7.385 9.265	4.3003 4.4345	1.8120	(.10) n.s.
5	Exp. Comp.	10.231 12.234	4.1600 4.8023	1.8850	(.10) n.s.
6	Exp. Comp.	4.410 6.088	3.3182 3.5177	2.0680	.05
Total	Exp. Comp.	43.923 52.382	14.4086 15.7349	2.3650	.05

Using a two-tailed test ($p < .05$), the data show a statistically significant difference on subtest 1 (Word Meaning) and subtest 6 (Copying) and on the total score between the experimental group and their classmates. The broader frame of reference and difference in home environment of the Classmates may in large part account for the difference in performance of these two groups.

Table 35 contains mean scores and standard deviations by subtest and total score of the experimental group and low-income pupils who have not been exposed to full year compensatory programs.

It can be observed that the mean score of the experimental group was higher on every subtest and total score. Using a one-tailed test ($p < .05$), the data show in comparing subtest and total MRT mean scores that there was a statistically significant difference in mean scores on subtest 2 (Listening) in the direction of the experimental group. In addition, there is a trend toward statistically significant differences on subtest 5 (Numbers), subtest 6 (Copying), and total score. The data show that low-income children who have participated in the Follow Through program made significantly greater progress in the development of listening skills when compared with low-income children who are not enrolled in Follow Through. The trend to greater achievement in other areas and in total readiness was present. Additional exposure of pupils to educational program next year may clarify this picture.

TABLE 35

COMPARISON OF MEAN SCORES AND STANDARD DEVIATIONS OF MRT SUBTESTS AND TOTAL FOR EXPERIMENTAL AND NHSNFT (LI) GROUPS

Experimental N = 39 Comparison N = 50

Subtest	Group	$\bar{X}$	SD	t-value	Significance Level
1	Exp. Comp.	6.128 6.060	1.9634 2.2575	0.1476	n.s.
2	Exp. Comp.	9.718 8.920	2.0248 1.8312	1.9266	.05
3	Exp. Comp.	6.077 5.400	2.9210 2.0591	1.2670	n.s.
4	Exp. Comp.	7.385 6.460	4.3003 3.3058	1.1348	n.s.
5	Exp. Comp.	10.231 9.120	4.1600 3.3444	1.3814	(.10) n.s.
6	Exp. Comp.	4.410 3.480	3.3182 2.8512	1.4052	(.10) n.s.
Total	Exp. Comp.	43.923 39.640	14.4086 10.4245	1.6083	(.10) n.s.

Table 36 contains mean scores and standard deviation by subtest and total score of NHSNFT (NLI) Group and Follow Through Classmates.

Using a two-tailed test ($p < .05$) the data show no statistically significant differences on all subtests. It would appear, based on measures of the MRT, that the achievement scores of children of middle class families are little affected by integrating the classroom with children of low-income families. These findings support the conclusion of national studies of school integration; that is, middle-income children achieve as well in integrated classrooms as they do in non-integrated classrooms. There is evidence that low-income children achieve better in an integrated classroom than in non-integrated classrooms.

It should be noted that pretest data are not available on either of these groups; therefore, we are unable to discuss gains since we do not know that the two groups were equivalent at the beginning of the year. Additional research is needed to give further support to this finding.

Table 37 contains mean scores and standard deviation by subtest and total score of the experimental group and non low-income ("regular") pupils.

TABLE 36

COMPARISON OF MEAN SCORES AND STANDARD DEVIATIONS OF MRT SUBTESTS AND TOTAL FOR NHSNFT (NLI) GROUP AND FOLLOW THROUGH CLASSMATES

NHSNFT (NLI) N = 36 Follow Through Classmates N = 34

Subtest	Group	$\overline{X}$	SD	t-value	Significance Level
1	NHSNFT (NLI)	8.138	2.6156	0.4841	n.s.
	Classmates	7.824	2.7382		
2	NHSNFT (NLI)	10.055	2.0809	0.2128	n.s.
	Classmates	10.176	2.5948		
3	NHSNFT (NLI)	8.444	3.5546	1.6654	n.s.
	Classmates	7.088	3.1376		
4	NHSNFT (NLI)	10.444	3.9260	1.1636	n.s.
	Classmates	9.265	4.4345		
5	NHSNFT (NLI)	13.444	4.6034	1.0611	n.s.
	Classmates	12.234	4.8023		
6	NHSNFT (NLI)	7.555	3.1130	1.8257	n.s.
	Classmates	6.088	3.5177		
Total	NHSNFT (NLI)	57.806	15.8969	1.4143	n.s.
	Classmates	52.382	15.7349		

TABLE 37

COMPARISON OF MEAN SCORES AND STANDARD DEVIATIONS OF MRT SUBTESTS AND TOTAL FOR EXPERIMENTAL AND NHSNFT (NLI) GROUPS

Experimental N = 39 Comparison N = 36

Subtest	Group	$\bar{X}$	SD	t-value	Significance Level
1	Exp.	6.128	1.9634	3.7318	.001
	Comp.	8.138	2.6156		
2	Exp.	9.718	2.0248	0.7013	n.s.
	Comp.	10.055	2.0809		
3	Exp.	6.077	2.9210	3.1185	.01
	Comp.	8.444	3.5546		
4	Exp.	7.385	4.3003	3.1663	.01
	Comp.	10.444	3.9260		
5	Exp.	10.231	4.1600	3.1331	.01
	Comp.	13.444	4.6034		
6	Exp.	4.410	3.3182	4.1683	.001
	Comp.	7.555	3.1130		
Total	Exp.	43.923	14.4086	3.9145	.001
	Comp.	57.806	15.8969		

Using a two-tailed test ($p < .05$), the data show statistically significant differences on all subtests (with the exception of subtest 2 - Listening) and total scores. Possible evidence of the effects of middle class home environment are indicated in these data, and the attendant disparity of achievement between low-income and non low-income children is made highly visible.

Total scores were converted on a five-point rating scale denoting readiness status with ranges as follows:

Readiness Status	Score Range
Superior	above 76
High normal	64 - 76
Average	45 - 63
Low normal	24 - 44
High risk	below 24

Table 38 compares the distribution of rated total scores of the experimental group (HSFT) and the major comparison group (HSNFT).

TABLE 38

DISTRIBUTION OF RATED TOTAL SCORES
EXPERIMENTAL GROUP / HSNFT

Readiness	Experimental Group		Comparison Group	
Status	N	%*	N	%
Superior	0	0	0	0
High normal	5	12.8	2	4.8
Average	13	33.3	23	54.8
Low normal	18	46.2	17	40.5
High risk	3	7.7	0	0

*Percentages do not total 100% due to rounding off.

The Chi-square was used in comparing the distributions of scores. No statistically significant differences were found. Above and below mean total scores were analyzed using Chi-square test, and no statistically significant differences between the experimental and comparison (HSNFT) groups were found.

The Draw-A-Man test, an index of general maturity, indicates no statistically significant differences when contrasting the experimental group scores with those of the major comparison group (HSNFT).

Table 39 compares the distribution of above average, average, and below average scores on the Draw-A-Man test.

TABLE 39

DISTRIBUTION OF DRAW-A-MAN SCORES
EXPERIMENTAL GROUP / HSNFT

	Experimental Group		Comparison Group	
General Maturity Status	N	%*	N	%
Above Average	8	21.1	9	22.0
Average	15	39.5	13	31.7
Below Average	15	39.5	19	46.3

*Percentages do not total 100% due to rounding off.

Comparison of Scores Within the Experimental Group

It was important in the analysis of MRT scores to determine if there were differences within the Follow Through program in terms of the:

1. Achievement scores of boys when compared with the achievement scores of girls.

2. Achievement scores of whites when compared with the achievement scores of nonwhites.

Table 40 summarizes these findings.

TABLE 40

COMPARISON OF MEAN MRT TOTAL SCORES AND STANDARD DEVIATION OF FOLLOW THROUGH PUPILS HOLDING CONSTANT RACE AND SEX

	Boys N=53	Girls N=34	White N=38	Nonwhite N=49
X	42.94	44.03	45.30	42.06
SD	12.10	14.10	11.22	14.00
t	0.3680		1.1486	
Signif. Level	n.s.		n.s.	

These data indicate, since there are no statistically significant differences in scores of Follow Through pupils when race and sex are held constant, that the Follow Through program is serving boys and girls, whites and nonwhites, equally well.

In summary, data seem to indicate that Follow Through pupils exhibit a comparable degree of readiness for first grade as children who participated in Head Start but not in Follow Through. The null hypothesis was affirmed: there were no statistically significant differences.

Differences between low-income and non low-income children are obvious and it remains to be seen after another year of exposure to Follow Through if these differences in the main can be decreased, if not obliterated.

The MRT data seem to indicate that:

1. Achievement scores of children of middle-income families are little affected by integrating the classroom with children of low-income families vis-a-vis Follow Through Classmates and NHSNFT(NLI) in terms of MRT total scores (see Table 36).

2. Children of low-income families benefit from participating in socially and economically integrated classrooms, e.g. the difference of MRT scores vis-a-vis Follow Through pupils and NHSNFT(LI).

Though the Metropolitan Readiness Tests provide an indication of readiness for first grade work, it is important to note that by virtue of being a single measure, gains for the year cannot be determined. Additional data are needed to put the MRT performance in perspective--that is, pre and posttest data. Subtests, and/or total, on the ITPA which reportedly correlate strongly with the Binet could be administered to all five comparison groups in order to establish a base from which to draw comparisons. Further, posttest data from such a test would show gains and allow for more thorough understanding of the amount of change by group during the school year.

DISCUSSION OF HIGHLIGHTS OF THE 1968-69 FOLLOW THROUGH EVALUATION

The Problem

Public school education has tended to serve a majority of youth in such a way that they have achieved skills and attitudes which provided them the means to upward social and economic mobility. Low-income children, on the other hand, largely have been unable to make good use of the standard programs and curricula of public schools in a way that the middle class population has historically been able to do. Thousands of children from low-income families across the country are moved on from the sixth grade with reading and math skills two to three grades below level. The problem of low achievement in these basic skills in the elementary schools forecasts severe difficulties in school work in later grades, when the ability to read and comprehend is requisite for successful academic achievement in all other studies. Some educators argue, and there is ample evidence to support their position, that it is possible to predict with a high degree of accuracy the success or failure of an individual, in terms of the ability to earn a livelihood that will make him a productive, participating citizen, by the time he is eight or nine years old.

To understand the problem of low achievement of children from low-income families is to know and understand the family life style from which these children come. For example, continuously low-income is directly associated with certain life conditions. Family disorganization, adults with little formal education, and overcrowding in terms of persons per room are all characteristics of an urban depressed area. The culture of poverty often generates a devaluation of self, especially for those who are Negro. Low verbal ability, learned habits of inattention, the learned need to take immediate physical action to make a point, low self-esteem--these conditions of learning contribute to the lower scores on standarized achievement tests that are associated with children of low-income families. Follow Through is a federally-funded program aimed at compensating children of low-income families for the handicaps that are due to the family situation and life style.

Pupil Selection and Project Organization

Approximately one-half of the children who were graduated from full year Head Start were selected to participate in the Wichita Follow Through program (kindergarten) and were provided comprehensive services not only in the area of instruction but, in addition, in the areas of nutrition, health, social service, psychological service, parent involvement activities, and staff development. The selection of Follow Through pupils was random and stratified by race (54% non-white 46% white). One hundred one low-income Follow Through children were bused to four elementary schools located in a variety of socioeconomic neighborhoods on the periphery of the city, where they were placed in seven classrooms with neighborhood children. The premise on which program planners devised the socioeconomic mix of Follow Through classrooms was that peer relationships in classrooms constitute an effective means by which disadvantaged pupils can be accelerated in their academic achievement without negatively affecting the achievement of children from more affluent backgrounds. Neighborhood children and low-income Follow Through children participated together in morning classroom activities until noon, at which time neighborhood children returned home. The kindergarten "day" for low-income children was extended to 2:00 p.m. Low-income Follow Through children were served a Class "A" hot lunch daily, and all Follow Through classrooms were provided morning snacks of juice and/or milk and cookies. Teachers and teacher aides utilized lunch and snack time as an avenue for further pupil development in language and social skills through discussion of food textures, tastes, smells, colors, and etc. This time was also useful in teaching the children to appreciate the importance of good nutrition in their physical, mental, and emotional growth. Height and weight changes were recorded on the five comparison groups.

Evaluation Objective

The overall objective of the 1968-69 Follow Through project evaluation was to assess the impact of the Follow Through program on pupils and parents. In order to implement the evaluation, five comparison groups were designated, and several instruments were employed to obtain data.

The experimental group (HSFT) was comprised of a stratified random selection of 40 low-income pupils enrolled in Follow Through. All Follow Through pupils participated in full year Head Start. The major comparison group (HSNFT) was comprised of a selection of 40 low-income children who participated in full year Head Start but were not selected for Follow Through. They attended their neighborhood schools. The groups were found to be equivalent in terms of chronological age and language age as measured by the ITPA. It is reasonable to assume that the groups were also equivalent in terms of mental age. Research studies indicate a high correlation between the mental age score of the Binet and the total ITPA score.

The remaining three comparison groups were comprised of: (1) classmates of the experimental groups, (2) low-income pupils attending Title I schools (NHSNFT-LI) who had not participated in full year Head Start, and (3) regular (non low-income) kindergarten pupils (NHSNFT-NLI) who attended the neighborhood school. See page 19 for discussion of comparison groups.

Parent Interviews

Interviews were conducted with parents or relatives of children in the experimental group (HSFT) and the major comparison group (HSNFT) in order to determine: (1) the characteristics of the family life styles and (2) the equivalence of the two groups in terms of family background. The families of the two groups were found to be comparable in background and can be characterized, in the main, as having

- low socioeconomic status based on low education levels and low skill occupations of the family breadwinner
- to rely heavily on public assistance as the primary source of income
- high percentage of fathers not presently living in the home
- large number of siblings (average is over five)
- to live in homes with persons/room ratios indicating overcrowding conditions by standards of the National Census Bureau
- family disorganization

In short, the families of the experimental and major comparison groups (HSNFT) evidence social pathology reported to be found in larger urban low-income areas. This fact would seem to augur greater success for educational programs structured to include heavy inputs in parent involvement and education.

Classroom Organization

Considerable variability was found in the composition of the seven Follow Through classrooms

- classes ranged in size from 20 to 30 pupils
- the percentage of low-income Follow Through pupils per classroom ranged from 37 to 71 percent
- the percentage per classroom of non-white low-income Follow Through pupils ranged from 43 to 92 percent
- the percentage of low-income Follow Through male pupils per classroom ranged from 44 to 76 percent
- the percentage of male Follow Through classmates ranged from 10 to 62 percent.

Cr[illegible]al questions are raised upon examination of the structure of classrooms. It would seem logical to postulate that classrooms comprised of high percentages of middle-income pupils will score significantly higher on achievement tests than those comprised of high percentages of low-income pupils. This hypothesis should be tested.

The Follow Through project in terms of classroom structure would appear to lend itself to this kind of analysis, vis-à-vis the program planners with the unique opportunity to judiciously manipulate the crucial "mix" variable. Research data would provide information to decision makers relevant to the question of optimum socioeconomic combination.

Class structure as related to achievement tests will be discussed later.

Parent Involvement

A basic tenet of Follow Through is that parents have both the right and the responsibility to share in determining the nature of their children's education. Parent involvement for research purposes was categorized into four areas: (1) home visits by Follow Through staff, (2) parent participation in the classroom as observers and/or volunteers and conferences at school with teachers, (3) parent educational and social activities, and (4) parent participation in the process of making decisions about the nature and operation of the project through meetings of the Policy Advisory Committee (PAC). The results showed that over 247 home visits had been made by Follow Through teachers and teacher aides. Fifty-six visits were made by parents to classrooms for purposes of observing and/or assisting. During the school year, parents attended 12 meetings focusing on educational and social activities planned and implemented by the Follow Through administrative staff and parents. Ninety-four percent of the parents of low-income Follow Through children attended at least one of the meetings.

Major efforts of the Policy Advisory Committee were directed toward the solution of bus problems, planning social and educational events to which parents as a group, and parents and children were invited, giving approval to the 1969-70 curriculum model for Follow Through.

Data reported by teachers provided a low estimate of parent involvement, because methods of reporting proved to be somewhat inadequate. Because of the significance the national guidelines place on the parent participation component of Follow Through, a more efficient means of recording and qualifying data should be devised. Further, six out of seven teachers stated that parent participation in classrooms was inadequate. Major obstacles to greater involvement were noted by Follow Through teachers as:

1. Lack of adequate public transportation and distance from the home to the school.
2. Unavailability of the family car. (Some families had only one car, and the husband took it to work.)
3. In some families, both parents were employed.
4. Smaller children were at home and baby-sitters were not available.

If Follow Through project planners are desirous of a strong parent involvement component, the above obstacles may need serious consideration.

Teacher and Teacher Aide Interviews

Through interviews and questionnaires submitted to teachers and teacher aides, it was determined that teachers as a group are

- comparatively young
- well qualified (though, by their own report, deficient in formal training in intergroup relations or sociology)
- relatively new to the kindergarten teaching profession. (Five out of seven have been teaching kindergarten less than five years.)

The majority of teachers perceived that dicipline and acting out behavior, absence due to missing the bus or to illness, language communication skills, and short attention span were the major problems in working with the low-income Follow Through children. The largest number of teachers saw pupil improvement in the area of awareness and acceptance of self, development of interest levels and curiosity, conceptualization, and readiness for more formal instruction. Teachers, in the main, expressed positive attitudes in assessing the rationale for integrated education. They saw as positive aspects provided by Follow Through

- opportunities for low-income children to know and interact with others who were different from themselves
- opportunity for all children to learn that differences of background are normal and acceptable, and that the color of a person's skin doesn't make a difference
- opportunities for those involved to learn that parents and children have some of the same needs regardless of skin color or income of the family.

Some negative aspects to the Follow Through project as expressed by teachers were

- long, unsupervised bus trips for pupils
- lack of understanding by school personnel not directly associated with the Follow Through project concerning the rationale and goals of the project
- the relative inaccessibility of the school to parents of Follow Through children.

Program planners may wish to consider means by which the perceived negative effects in this Follow Through project can be eliminated.

Goals of teachers in making home visits to parents of Follow Through children were expressed as being a means, not only by which the teacher could inform the parents of how their children were doing at school and obtain information about the home, but also as a means of obtaining the parents' views and goals for their children. Home visits, therefore, served as a vehicle for dialogue, not monologue, and provided the opportunity for the school and the home each to buttress the efforts of the other. This was a major contribution which educators and behavioral scientists believe to be essential in working with children of low-income families.

Teachers expressed enthusiasm in having a teacher aide (paraprofessional) in the classroom. Some teachers (those with high percentages of low-income Follow Through pupils) expressed a desire to have fewer Follow Through children than neighborhood children in classrooms and a smaller total class size. Teachers perceived, generally speaking, that white and non-white Follow Through pupils interacted voluntarily and in a positive manner. They suggested that job training should be more concrete rather than philosophic and should include some introduction to community programs such as Community Action Programs and Public Welfare. Some teachers and teacher aides expressed the opinion that children with extreme emotional or medical problems should not be included in the Follow Through program because the program is not equipped to cope with gross debilities. Teacher aides expressed unanimous agreement as to the positive effects of the Follow Through project. They indicated high job satisfaction. Some believed they could attend to more duties than they had been assigned.

Results of Kindergarten Check List

The Kindergarten Check List (pretest and posttest), a measure of adjustment to school and readiness for academic work, is scored by the classroom teacher. The results showed that on the pretest, low-income Follow Through children as a group obtained the highest score of any of the five comparison groups indicating poorest adjustment and readiness for academic work. On the posttest, low-income Follow Through pupils showed the greatest gains in adjustment to school of any of the five comparison groups and scored lower as a group (indicating better adjustment to school) than did the NHSNFT-LI. The latter groups evidenced a loss in adjustment functioning. When contrasting scores of the five comparison groups on the posttest, Follow Through pupils evidenced the largest decrease in the number of severe problems as measured by the Kindergarten Check List. On the posttest, the other low-income comparison groups, HSNFT and NHSNFT-LI by the same measure showed an increase in the percentage of severe problems in adjustment to the classroom.

In regard to the above teacher evaluation of pupil adjustment, teachers are closest to "where the action is," and their perceptions of pupil adjustment to school and readiness for academic work are very important. Program planners may indeed be aware of the so-called Hawthorne effect which often envelopes a newly organized project. That is to say, a plethora of enthusiasm and energy accompany the rudimentary efforts of an enterprise. Sustaining the original fervor is a challenge to all who are involved, for, as some studies show, teacher expectations have a major effect on pupil achievement. That is to say, it is possible for one person's expectation for another person's behavior to become an accurate prediction simply by virtue of its having been made.

Results of the Illinois Test of Psycholinguistic Abilities

The Illinois Test of Psycholinguistic Abilities, designed to detect specific disabilities in language development, was administered in November and May to a sample of the experimental group (HSFT) and the major comparison group (HSNFT). The results showed that no statistically significant differences were made on scores between the two groups on any of the nine ITPA subtests or total scores on the posttest. In contrasting the experimental group and the comparison group, greater mean gains were obtained by the experimental group on six out of nine subtests and the total score of the ITPA.

Statistically significant gains between pretest and posttest were made by the experimental group on six of nine subtests of the ITPA. The comparison group demonstrated statistically significant gains between pretest and posttest on seven of nine subtests of the ITPA. At posttest, both groups, experimental and comparison, on total ITPA score functioned below the mean chronological age of their group, a fact indicating the seriousness of the language deficiency in both groups. The total number of months gained by the experimental group on the nine subtests of the ITPA was 6.2. The total number of months gained by the comparison group was 5.5.

The null hypothesis of no statistically significant differences was confirmed in relation to the ITPA scores. However, the short span of the testing interval (six months) may indeed have precluded significance. There may be a trend in favor of the experimental group in terms of total months gained. Another year of exposure to Follow Through may illuminate the picture.

Results of Metropolitan Readiness Test

The Metropolitan Readiness Tests (MRT) purport to measure the extent to which pupils have developed skills and abilities that contribute to readiness for first grade instruction. The MRT was administered in May, 1969 by school counselors to all members of the five comparison groups. The data show, in comparing subtests and total MRT mean scores, that there were no statistically significant differences between the experimental group and the major comparison group. Though the major comparison group (HSNFT) scored higher than the experimental group on four of the six subtests and on the total score, on only one subtest was significance approached ($p < .10$), and this was in favor of the experimental group.

In contrasting MRT scores of the experimental group with those of the low-income pupils who had not been exposed to full year compensatory programs (NHSNFT-LI), statistically significant differences were found on one subtest and a trend ($p < .10$) appeared on the two other subtests and the total score. It appears, therefore, that low-income children who have participated in the Follow Through program may be making greater progress in total readiness for academic work than are kindergarten children who have not been exposed to compensatory programs. Additional exposure of pupils to educational programs next year may clarify this picture.

No significant differences were found in comparing the two non-low-income groups, Follow Through Classmates and the non-Head Start non-Follow Through non-low-income (NHSNFT-NLI) groups.

Pretest MRT data were not available and, therefore, gains cannot be determined on any of the comparison groups. However, based on MRT measure, posttest only,

- readiness scores of pupils from non-low-income families are not significantly affected by integrating the classroom with children of low-income families, vis-a-vis mean scores of Follow Through classmates and NHSNFT-NLI
- children from low-income families participating in compensatory programs (i.e., Follow Through) benefit from participating in socially and economically integrated classrooms, vis-a-vis the experimental group and NHSNFT-LI.

Additional data are needed to put the MRT scores in perspective. Subtests and/or total on the ITPA (which reportedly correlate positively with the Binet) or the Binet or WISC should be administered on a pretest and posttest basis in subsequent evaluations in order to establish a base from which to draw comparisons. Further, in order to examine scores by classroom, and in order to analyze the effects of varied socioeconomic status (SES) compositions of classrooms, pretest and posttest data are needed and recommended in the design for another year's evaluation.

APPENDIX A

KINDERGARTEN FOLLOW THROUGH PROJECT 1968-1969
Parent Interview Form

Date of interview ____________________ Interviewer ______________________________

Kindergarten Follow Through _________ Public School Kindergarten __________

My name is _________________________ and I am employed by the Wichita Public Schools to obtain some information about your child who is enrolled in the kindergarten Follow Through project _____, or in public school kindergarten and is a Head Start graduate _____.

We would like your name, but we will not use your name in any way in connection with your answers.

Mrs. ____

Mr. ____

Miss ____

Your home address ____

1. Kindergarten child's name ______________________________________
2. School kindergarten child attends ______________________________________
3. Name of kindergarten child's teacher ______________________________________
4. Your relationship to kindergarten child ______________________________________
5. How many children under eighteen years of age live in the home? __________
6. What are the ages of your children? ______________________________________
7. We would like to know how your child acts since being in the kindergarten program.

Does your kindergarten child:	More	Same	Less
(a) act happy PROBE How do you account for this?	____	____	____
(b) act interested	____	____	____
(c) ask questions	____	____	____
(d) look at magazines or books	____	____	____
(e) talk	____	____	____
(f) explore things around the house	____	____	____

8. We would like to know more about how your kindergarten child behaves.

Does he (she)	Better	Same	Not As Well
(a) get along with friends	____	____	____
(b) get along with brothers, sisters	____	____	____
(c) get along with you	____	____	____
(d) get along with older people	____	____	____
(e) dress himself (herself)	____	____	____

9. What does your kindergarten child usually do after he (she) gets home from school? ______________________________

   (a) on weekends ______________________________

   ____

10. What kind of books does your kindergarten child like? ______________

    (a) does he (she) have any of these books of his (her) own? __________

11. Would your kindergarten child rather look at picture books, listen to stories being read, or both? ______________________________

    (a) how often ______________________________

12. Do your children read library books? Often ____ Sometimes _____ Seldom ______ Never _____

    (a) Where do they check out the books? ______________________

13. When your child in the kindergarten program comes home from school each day, does he (she) usually talk about what happened in school?

    (a) almost never ____

    (b) now and then ____

    (c) almost daily ____

(Only to Follow Through respondent.)

14. If you had any other children kindergarten age would you like to put them in the kindergarten Follow Through program?

(a) yes ____
(b) no ____
(c) don't know ____

(Only to Follow Through respondent.)

15. If it were possible for others to put their children in the Follow Through program would you recommend that they do so?

(a) yes ____
(b) no ____
(c) don't know ____

16. How did you first hear about the Follow Through program?

(Only one answer)

(a) from other parents ____
(b) from other children ____
(c) from school people ____
(d) read about it ____
(e) from CAP people ____
(f) uncertain ____

17. Have you ever visited your child's kindergarten class?

(a) yes, once ____
(b) yes, two, three times ____
(c) yes, four, five times ____
(d) yes, six or more times ____
(e) no ____
(f) don't know ____

18. Since your child started kindergarten, have you ever talked to your child's teacher?

    (a) yes, once ____
    (b) yes, two, three times ____
    (c) yes, four, five times ____
    (d) yes, six or more times ____
    (e) no ____
    (f) don't know ____

19. Has your child's kindergarten teacher ever visited your home?

    (a) yes, once ____
    (b) yes, two, three times ____
    (c) yes, four, five times ____
    (d) yes, six or more times ____
    (e) no ____
    (f) don't know ____

20. Does your husband (or wife) live here now? ________

21. Are either you or your husband or wife usually home during the day?

    (a) I am usually at home ____
    (b) we both are usually at home ____
    (c) neither of us is usually at home ____

22. What do you usually do with your kindergarten child if he or she gets sick if neither you nor your husband is at at home during the day?

    (Only one answer)

    (a) one of us is always at home ____
    (b) he (she) stays with relatives ____
    (c) he (she) stays with neighbors ____
    (d) our older children take care of him (her) ____
    (e) he (she) stays alone until husband or wife gets home ____

23. Does this house have:

	Yes	No
(a) hot and cold running water	____	____
(b) bathroom with flush toilet	____	____
(c) shower or tub	____	____

24. Most parents want certain things for their children. How far in school do you want your kindergarten child to go? ______________________________

25. What was the highest grade in school you finished? ______________________

26. What was the highest grade in school husband (or wife) finished? __________

27. What kind of work do you do? (Be specific) __________________________

28. What kind of work does your husband or (wife) do? (Be specific) __________

29. Where does most of the money for your family come from?

(a) husband's job ____

(b) wife's job ____

(c) husband and wife equally ____

(d) public welfare ____

(e) other ____

30. We would like to know something about your meal times.

(a) does your kindergarten child usually eat breakfast __________________

(b) if yes what does he (she) usually eat ____________________________

31. Who/of your family was present for your last evening meal? ______________________

(a) where did you eat your last evening meal __________________________

32. What did you talk about at supper time last night? ______________________

(a) conversation not allowed ____

(b) no conversation, no reason why ____

(c) ate alone ____

(d) others participated, but kindergarten child did not ____

(e) children and adults engaged in conversation ____

(f) children talked to each other ____

33. Would you say this was a usual evening meal talking and visiting together at supper? __________ If no, explain. ______________________________

34. What did you do last weekend that included your kindergarten child?

35. How do you feel about black and white children being in the same kindergarten class?

Probe: Anything else?

(If Follow Through respondent.)

36. Were there any problems with your kindergarten child riding the bus to school? __________ If yes please tell me.

(If Follow Through respondent.)

37. Have you any additional comments about the Follow Through program?

38. What meetings of Follow Through parents have you attended this year? What was your feeling about each of these?

PROBE Anything else about parent meetings?

39. Is there anything else you would like to tell me?

For Interviewer

40. Description of house.

Thank you very much.

APPENDIX B

Follow Through Teacher Questionnaire

Name ______________________________

School ______________________________

Name of teacher aide ______________ ______________

1. Including this year, how many years have you been teaching? __________

2. Including this year, how many years have you been teaching kindergarten? ________

3. What is the highest level of education you have attained? __________

We realize that there is probably a full range of ability in your classroom, but considering your Follow Through group as a whole we would like your reaction. Below is a list of various areas in which your students may have improved as a result of participation in the Kindergarten Follow Through Project. Show how much improvement you feel your Follow Through group has made in each of the following areas listed. Use the following code:

0	Can't rate this
1	Very little improvement
2	Little improvement
3	Some improvement
4	A great deal of improvement

	0	1	2	3	4
4. Auditory, visual, and visual motor skills	____	____	____	____	____
5. Motor coordination and manipulative skills	____	____	____	____	____
6. Oral language skills	____	____	____	____	____
7. Self expression with verbal and non-verbal media	____	____	____	____	____
8. Listening skills and attention span	____	____	____	____	____
9. Awareness and acceptance of self	____	____	____	____	____
10. Initiative and aspirational level	____	____	____	____	____
11. Self direction, independence and acceptance of responsibility	____	____	____	____	____
12. Interpersonal relationships with others, including those with contrasting backgrounds	____	____	____	____	____
13. Interest levels and curiosity	____	____	____	____	____

Follow Through Teacher Questionnaire
April 1968-69

	0	1	2	3	4
14. Understanding of the environment and the relationship of self to environment	____	____	____	____	____
15. Conceptualization and readiness for more formal instruction	____	____	____	____	____
16. Physical health including dental and nutritional	____	____	____	____	____

Below is a list of problems you may have had with your Kindergarten Follow Through pupils. Show how serious each of the problems has been in your Follow Through class. Use the following code:

0 Can't rate this
1 No problem
2 A slight problem
3 A serious problem

	0	1	2	3
17. Overall attendance	____	____	____	____
18. Absence due to illness Specify	____	____	____	____
19. Absence due to weather	____	____	____	____
20. Absence due to missing the bus	____	____	____	____
21. Discipline	____	____	____	____
22. Dropouts	____	____	____	____
23. Transfers in	____	____	____	____
24. Ability to comprehend	____	____	____	____
25. Language communication skill	____	____	____	____
26. Acting out behavior	____	____	____	____
27. Attention span	____	____	____	____
28. Other (specify)	____	____	____	____

29. How would you rate the quality of the classroom help you receive from the teacher aide?

Very low quality ____
Low quality ____
High quality ____
Very high quality ____

Follow Through Teacher Questionnaire
April 1968-69

30. Do you feel the selection procedures for the teacher aide are adequate?

Yes ____
No ____
No opinion ____

Explain:

31. Do you feel the provisions for training teacher aides are adequate?

Yes ____
No ____
No opinion ____

Explain:

32. How many hours of pre-service training did you attend? ____________________________

33. What suggestions, if any, have you for improving pre-service training for teachers?

34. What suggestions, if any, have you for improving in-service training for teachers?

Follow Through Teacher Questionnaire
April 1968-69

35. What, if any, in your opinion are the positive aspects of a kindergarten program that is structured to provide encounters for children with others who are different socially, economically and racially?

36. What, if any, in your opinion are the negative aspects of a kindergarten program that is structured to provide encounters for children with others who are different socially, economically and racially?

37. In your opinion was the amount of parent participation in your classroom adequate?

Yes ____
No ____
No opinion ____

Please elaborate:

Follow Through Teacher Questionnaire
April 1968-69

38. In your opinion what, if any, are the major obstacles in obtaining greater parent involvement in the Kindergarten Follow Through Project?

38A. Please list in priority order your personal goals in making home visits to parents of Kindergarten Follow Through children.

39. In your opinion, in the overall, were instructional materials and equipment

totally inadequate ____
somewhat inadequate ____
adequate ____
somewhat more than adequate ____
very much more than adequate ____

Please elaborate:

40. How would you rate the amount of classroom space available?

Inadequate ____
Adequate ____
Exceptionally good ____

Comments:

We are interested in your opinion about the interpersonal relationships demonstrated within your classroom.

41. Generally speaking, in your morning classroom, do the white and non-white children voluntarily interact with each other in a positive way?

Yes ____
No ____
Don't know ____

If answer is "no" or "don't know" please explain.

Follow Through Teacher Questionnaire
April 1968-69

42. Generally speaking, in your morning classroom, do the Follow Through and non-Follow Through children voluntarily interact with each other in a positive way?

Yes ____
No ____
Don't know ____

If answer is "no" or "don't know" please explain.

43. List the trips and tours on which you have taken your Follow Through students.

44. Please give us any suggestions or recommendations you may have for improving the Follow Through Project.

45. Please list the schedule of activities for a typical day of Follow Through pupils and approximate times for these activities.

Activity	Beginning Time	Ending Time

APPENDIX C

Follow Through Teacher Aide Questionnaire

Name ______________________________

School ______________________________

Name of teacher ______________________________

Below are listed various activities which could be performed by the teacher aide. Show how often during a normal week you do each activity and how useful you feel the activity is. Use the following code:

0 Never do this
1 Do this often, but feel it is not useful
2 Do this often, and feel it is useful
3 Do this very little, and feel it is not useful
4 Do this very little, and feel it is useful

	0	1	2	3	4
1. Helping with supplies, materials, and equipment					
2. Helping children with clothing and personal needs					
3. Preparing the room for activities					
4. Assisting with lunches and snacks					
5. Helping with cleanup					
6. Taking children to other rooms					
7. Helping with outdoor play					
8. Accompanying children on trips					
9. Reading or telling a story					
10. Talking and listening to children					
11. Mounting pictures and assisting with bulletin boards					
12. Using special language kits					
13. Assisting with pupil instruction					
14. Other ______________________					

Follow Through Teacher Aide Questionnaire
April 1968-69

15. What is the highest grade in school you completed? ______________________

16. Which one category best describes the type of work you did before you joined the Kindergarten Follow Through Project? (Mark only one)

Housewife ____
Full year Head Start aide ____
Summer Head Start aide ____
Other ______________________

17. Including this year, how many years have you been working in full year Head Start and/or Kindergarten Follow Through? ______________________

18. Do you feel that you could handle more duties than you are presently assigned?

Yes ____
No ____

Please explain:

Below is a list of various areas in which Kindergarten Follow Through students may have improved as a result of being in the Kindergarten Follow Through Project. In your opinion, how do you feel the Kindergarten Follow Through students in general have improved since entering the program? Use the following code:

0	Can't rate this
1	Very little improvement
2	Little improvement
3	Some improvement
4	Great improvement

	0	1	2	3	4
19. Hearing, seeing, and hand-eye coordination skill	____	____	____	____	____
20. Motor coordination (e.g. bouncing ball, balancing, writing)	____	____	____	____	____
21. Oral language skills	____	____	____	____	____
22. Self expression in speaking and non-speaking (crafts, dancing, dramaticizing)	____	____	____	____	____
23. Self concept and awareness	____	____	____	____	____

ollow Through Teacher Aide Questionnaire
pril 1968-69

	0	1	2	3	4
24. Finds things to do without being helped					
25. Independence and acceptance of responsibility					
26. Relationships with classmates, including those of different backgrounds					
27. Interest levels and curiosity					
28. Adapting to the school situation					
29. Ability to think (understanding number concepts)					
30. Physical health, including dental and nutritional					

31. Please give us any suggestions that you believe will help improve the Follow Through Project.

32. How many hours of pre-service training did you attend? ____________________

33. What long range goals have you for your working career? (Finish college, become a teacher, etc.)

34. Is there anything else about the Follow Through Project you would like to tell us?

Thanks

APPENDIX D

MID SEMESTER (JANUARY 1969) TEACHER INTERVIEWS SCHEDULE

1. Specialized training in intergroup relations or culture of poverty

2. Why did you decide to participate in the Follow Through project?

3. Number of Follow Through students

4. Total number of students in a.m.

5. In-service training:

   (a) What would you say was the most helpful aspect of your in-service training? (Probe) Anything else?

   (b) What additional help would you recommend to be included in in-service training for Follow Through teachers? (Probe) Anything else?

6. Now that you have been working in the Follow Through program approximately _____ months, I wonder if you would tell me how you feel about it.

7. What percent of your Follow Through Class are non-white?

8. Before working in Follow Through or Head Start, had you ever been in a Negro neighborhood?

   (a) How did you feel the first time you were in a Negro neighborhood?

9. There is a great amount of discussion these days about the value of the neighborhood school as compared to busing children in order to give them an integrated experience. What special benefits (if any) do you feel your Follow Through pupils are gaining from the project as it is designed now in terms of a racially integrated opportunity?

10. Suggestions for improving project.

APPENDIX E

Kindergarten Check List

Child____ Birthdate_______________

Teacher_________________________ School________________ Date__________

Indicate for each item by checking in one of the four columns the extent to which each statement is true for the child being rated. Consider his (or her) behavior during the past week or two. We are interested in how true these statements are of the child at the present time.

	Usually or Always True	Often True	Occasionally True	Seldom or Never True
1. Cannot take care of his personal needs	( )	( )	( )	( )
2. Is unable to work independently	( )	( )	( )	( )
3. Does not assume responsibility	( )	( )	( )	( )
4. Lacks self confidence	( )	( )	( )	( )
5. Cries easily	( )	( )	( )	( )
6. Doesn't complete work he starts	( )	( )	( )	( )
7. Has a short attention span	( )	( )	( )	( )
8. Is unable to get along with peers (fights, not share or take turns, etc.)	( )	( )	( )	( )
9. Has immature, unclear or inadequate speech	( )	( )	( )	( )
10. Has limited background of information and experience	( )	( )	( )	( )
11. Has no interest in school activities (books, pictures)	( )	( )	( )	( )
12. Uses very little verbal communications	( )	( )	( )	( )
13. Cannot follow directions	( )	( )	( )	( )
14. Makes constant demands for attention	( )	( )	( )	( )
15. Has poor coordination of large muscles	( )	( )	( )	( )
16. Does not participate in group activity	( )	( )	( )	( )
17. Does not accept correction or criticism	( )	( )	( )	( )
18. Is insecure in leaving home (mother)	( )	( )	( )	( )
19. Has poor coordination of small muscles	( )	( )	( )	( )
20. Is unable to sit still	( )	( )	( )	( )
21. Has poor listening habits	( )	( )	( )	( )
22. Withdraws from others	( )	( )	( )	( )

5-14-64

APPENDIX F

TABLE 1-A

ITPA

AUDITORY DECODING RAW SCORE RESULTS

HSFT N=40 HSNFT N=41

	Pretest Scores		Posttest Scores		Gain Scores	
	HSFT	HSNFT	HSFT	HSNFT	HSFT	HSNFT
$\bar{X}$	17.25	17.41	20.18	19.63	2.93	2.22
SD	4.77	4.94	4.44	5.38	5.06	5.50
Dif. between $\bar{X}$s	.16		.55		.71	
t	.15		.49		.59	
Signif. Level	n.s.		n.s.		n.s.	

TABLE 2-A

ITPA

VISUAL DECODING RAW SCORE RESULTS

HSFT N=40 HSNFT N=41

	Pretest Scores		Posttest Scores		Gain Scores	
	HSFT	HSNFT	HSFT	HSNFT	HSFT	HSNFT
$\bar{X}$	11.13	10.71	13.28	12.46	2.15	1.76
SD	3.94	3.57	2.96	3.55	4.57	4.37
Dif. between $\bar{X}$s	.42		.82		.39	
t	.49		1.10		.39	
Signif. Level	n.s.		n.s.		n.s.	

TABLE 3-A

ITPA

AUDITORY-VOCAL ASSOCIATION RAW SCORE RESULTS

HSFT N=40 HSNFT N=41

	Pretest Scores		Posttest Scores		Gain Scores	
	HSFT	**HSNFT**	**HSFT**	**HSNFT**	**HSFT**	**HSNFT**
$\bar{X}$	13.37	13.32	15.45	15.17	2.08	1.85
SD	4.43	3.62	3.96	3.53	3.22	3.21
Dif. between $\bar{X}$s	.05		.28		.23	
t	.06		.33		.31	
Signif. Level	n.s.		n.s.		n.s.	

TABLE 4-A

ITPA

VISUAL-MOTOR ASSOCIATION RAW SCORE RESULTS

HSFT N=40 HSNFT N=41

	Pretest Scores		Posttest Scores		Gain Scores	
	HSFT	**HSNFT**	**HSFT**	**HSNFT**	**HSFT**	**HSNFT**
$\bar{X}$	11.53	11.71	13.78	13.93	2.25	2.22
SD	4.51	4.06	3.82	3.45	4.79	4.66
Dif. between $\bar{X}$s	.18		.15		.03	
t	.19		.19		.03	
Signif. Level	n.s.		n.s.		n.s.	

TABLE 5-A

ITPA

VOCAL ENCODING RAW SCORE RESULTS

HSFT N=40 HSNFT N=41

	Pretest Scores		Posttest Scores		Gain Scores	
	HSFT	HSNFT	HSFT	HSNFT	HSFT	HSNFT
$\bar{X}$	13.26	15.32	15.26	16.76	2.00	1.44
SD	5.57	5.03	5.60	5.32	6.05	4.62
Dif. between $\bar{X}$s	2.06		1.50		.56	
t	1.72		1.21		.46	
Signif. Level	n.s.		n.s.		n.s.	

TABLE 6-A

ITPA

MOTOR ENCODING RAW SCORE RESULTS

HSFT N=40 HSNFT N=41

	Pretest Scores		Posttest Scores		Gain Scores	
	HSFT	HSNFT	HSFT	HSNFT	HSFT	HSNFT
$\bar{X}$	11.83	10.85	12.68	12.17	.85	1.32
SD	3.64	3.39	3.86	3.39	3.51	3.23
Dif. between $\bar{X}$s	.98		.51		.47	
t	1.13		.62		.62	
Signif. Level	n.s.		n.s.		n.s.	

TABLE 7-A

ITPA

AUDITORY-VOCAL AUTOMATIC RAW SCORE RESULTS

HSFT N=40 HSNFT N=41

	Pretest Scores		Posttest Scores		Gain Scores	
	HSFT	HSNFT	HSFT	HSNFT	HSFT	HSNFT
X̄	9.00	7.85	9.28	9.39	.28	1.54
SD	4.50	3.89	4.63	4.49	3.88	3.71
Dif. between X̄s	1.15		.11		1.26	
t	1.21		.11		1.48	
Signif. Level	n.s.		n.s.		n.s.	

TABLE 8-A

ITPA

VISUAL-MOTOR SEQUENCING RAW SCORE RESULTS

HSFT N=40 HSNFT N=41

	Pretest Scores		Posttest Scores		Gain Scores	
	HSFT	HSNFT	HSFT	HSNFT	HSFT	HSNFT
X̄	11.67	11.59	12.50	11.71	.83	.12
SD	3.84	3.83	4.79	3.30	3.66	4.11
Dif. between X̄s	.08		.79		.71	
t	.10		.86		.80	
Signif. Level	n.s.		n.s.		n.s.	

TABLE 9-A

ITPA

AUDITORY-VOCAL SEQUENCING RAW SCORE RESULTS

HSFT N=40 HSNFT N=41

	Pretest Scores		Posttest Scores		Gain Scores	
	HSFT	HSNFT	HSFT	HSNFT	HSFT	HSNFT
$\bar{X}$	18.70	19.68	20.73	19.58	2.03	-.10
SD	5.81	7.54	6.82	6.24	4.54	3.19
Dif. between $\bar{X}$s	.98		1.15		2.13	
t	.65		.78		2.42	
Signif. Level	n.s.		n.s.		.01	

TABLE 10-A

ITPA

TOTAL RAW SCORE RESULTS

HSFT N=40 HSNFT N=41

	Pretest Scores		Posttest Scores		Gain Scores	
	HSFT	HSNFT	HSFT	HSNFT	HSFT	HSNFT
$\bar{X}$	117.15	118.54	133.43	130.39	16.28	11.85
SD	25.87	23.87	25.46	24.89	13.71	14.85
Dif. between $\bar{X}$s	1.39		3.04		4.43	
t	.25		.53		1.37	
Signif. Level	n.s.		n.s.		.10	